NOKIA
*CONSUMER ELECTRONICS*

# *Service-Manual*

**STEREO PLUS**

TV
059a

1994

NOKIA SALORA OCEANIC

A 34a

**Chassis STEREO PLUS**

Abglelch/Callbratlon
Equilibrage/Messa a punto

Kurzbedienungsanleitung
Summarized instructions
Mode d'emplol abrege
Brevi IstruzionI per l'uso

Ersatzteile/Replacement parts
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6611 73 19

**Unterlagen-Oberslcht**

**Documents view**

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B 33a

**Tuner**

| | |
|---|---|
| **HYPERBAND** | **5823 1 0 1 4** |
| **SAT-Modul** | **58564017** |

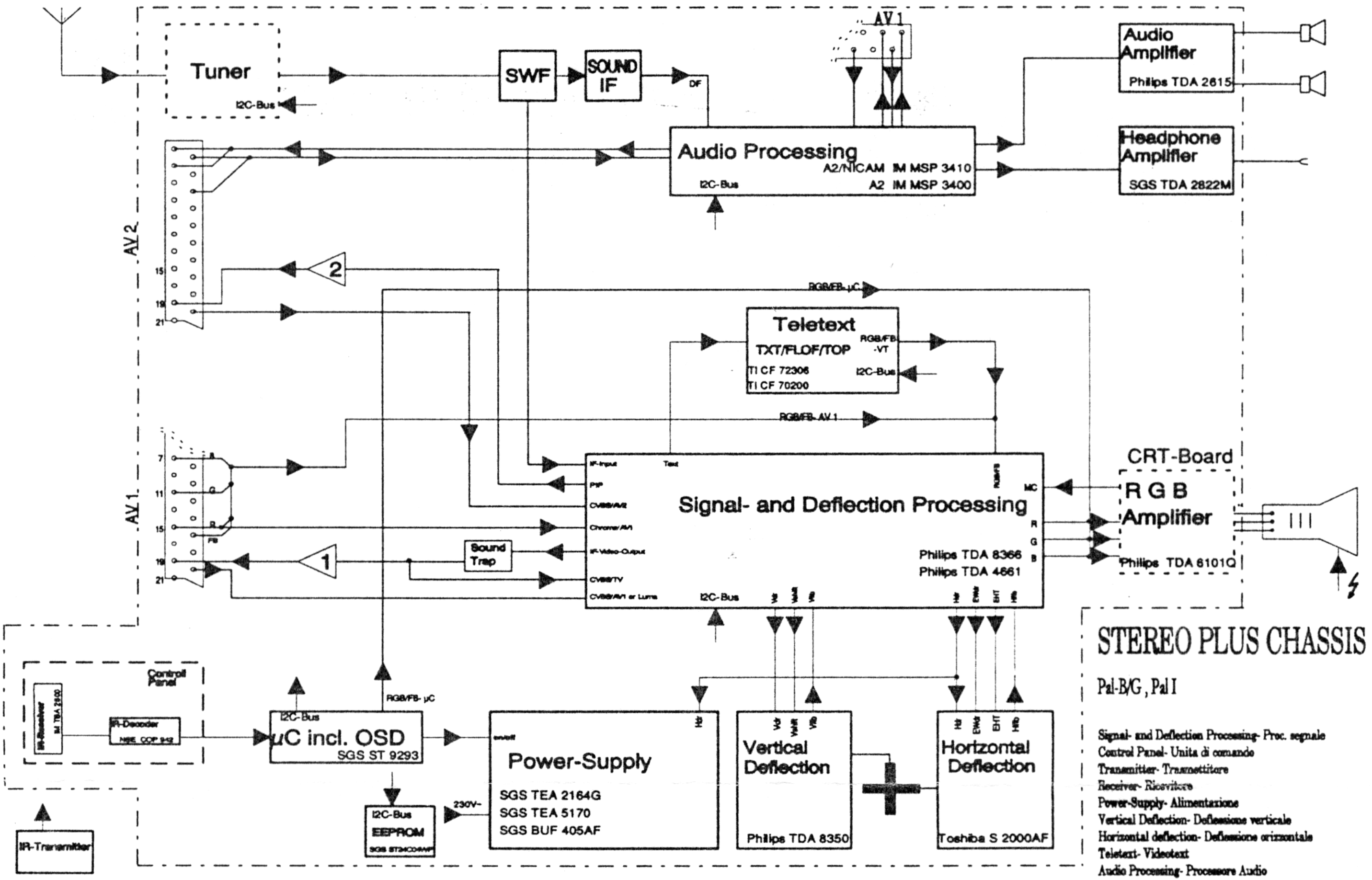
6611 73 20

| | |
|---|---|
| Achtung ! | Bei Reparaturen gultige Sicherheitsvorschriften beachten ! |
| Warning ! | Service and repair work to be performed only in accordance with existing safety regulations |
| Attention I | En faisant des reparations tenez compte des prescriptions de securite ! |
| Attenzione ! | Osservare le norme di steurezza vigenti in caso di riparazioni I |

Bei Nachbestellungen von Manualen bitte Geratetyp und Gerate-ldentnummer angeben.
When re-ordering manuals, please quote the model name and part number.
En cas de commando supplementaire de manuels veuillez indiquer le typ **et** le **numerode** l'appareil.
Per riordinare i manuali, indicare il modello detl'apparecchio ed Il numereo categorico.

**66117318(9408)8**

Anderungen vorbehallen / Modilkalions reserved / Modifications resovees / Con riserva di modiliche


AV 1
Tuner
I2C-Bus
SWF
SOUND IF
DF
Audio Amplifier
Philips TDA 2615
Audio Processing
A2/NICAM IM MSP 3410
A2 IM MSP 3400
I2C-Bus
Headphone Amplifier
SGS TDA 2822M
AV 2
15
19
21
2
RGB/FB- µC
Teletext
TXT/FLOF/TOP
RGB/FB -VT
TI CF 72306
TI CF 70200
I2C-Bus
RGB/FB- AV 1
AV 1
7
11
15
19
21
B
G
R
FB
1
Sound Trap
IF-Input
Text
PIP
CVBS/AV2
Chroma/AV1
IF-Video-Output
CVBS/TV
CVBS/AV1 or Luma
RGB/FB
MC
Signal- and Deflection Processing
R
G
B
Philips TDA 8366
Philips TDA 4661
I2C-Bus
CRT-Board
R G B Amplifier
Philips TDA 6101Q
Controll Panel
IR-Receiver
IM TBA 2800
IR-Decoder
NSE COP 842
IR-Transmitter
I2C-Bus
µC incl. OSD
SGS ST 9293
RGB/FB- µC
I2C-Bus
EEPROM
230V~
on/off
Power-Supply
SGS TEA 2164G
SGS TEA 5170
SGS BUF 405AF
Vertical Deflection
Philips TDA 8350
Horizontal Deflection
Toshiba S 2000AF
EHT

# STEREO PLUS CHASSIS

Pal-B/G , Pal I

Signal- and Deflection Processing- Proc. segnale
Control Panel- Unita di comando
Transmitter- Trasmettitore
Receiver- Ricevitore
Power-Supply- Alimentazione
Vertical Deflection- Deflessione verticale
Horizontal deflection- Deflessione orizzontale
Teletext- Videotext
Audio Processing- Processore Audio
Headphone amplifier- Amplificatore per cuffia
Sound- Suono

**Achtung:** (betr. Schaltnetzteil)
Fur **CO 12** nur Originalteil 3422 06 37 verwenden. Bei handelsublichem Elko **CO 12** muB parallel 0,47 uF MKT **zusatzllch** bestuckt werden.

1. **Mlt abgetrennter Horizontalendstufe (z.B. AnschluB 2 an TK 60 often) und einer Ersatzbelastung an der Kathode von VO 41 (100W Gluhlampe) muR das Netzteil ca. 100% der Sollspannung llefern.**
2. Zur Fehlersuche bei Sicherungsbetrieb des Netzteiles kann **CO 15** uberbruckt werden. Wurde der Sicherungsbetrieb durch einen fluchtigen Uberlastfall ausgelost, kann das Gerat durch Aus- und Einschalten des Netzschalters wieder in Betrieb genommen werden. Bei Aniaufprobleme kann durch uberbrucken von Kollektor/ Emitter von **VE 14** (Control unit) , das Netzteil zwangsanlaufen.
3. Auf brummfreie Gleichspannung achten. Z.B. die Brummspannung von U1 liegt bei ca. 4V und sollte, bedingt durch Kapazitatsverlust von CO 42, nicht viel groBer werden. Die Brummspannungen der ubrigen Gleichspannungen sollten unter 1V liegen. Die Brummspannungen von U2, U3 und U5 liegen im mV-Bereich.

## Instructions for repair work

N.B.:(cc. switch-mode)
Please use only original component 3422 06 37 for CO 12 . If standard size electrolyt capacitor CO 12 is used, parallel 0,47 uF MKT must be installed additionally.

1. **With the horizontal output stage disconnected (e.g. connection 2 at TK 60 open) and a substitute load at the cathode of VO 41 (100 W lamp), the power pack must supply approx. 100% of the setpoint voltage.**
2. For servicing the set under operating conditions when the electronic fuse has activated, can be connected across CO 15, IF the electronic fuse cuts out due to a momentary overload, the appliance can be re-started by switching the mains switch off and then **on** again.
3. Make sure there is hum-free d. c. voltage available. For example: the ripple voltage of U1 is approx. 4V and should, due to capacitance loss of CO 42, not increase much more. The ripple voltages of the other d.c. voltages should be less than 1 V. The ripple voltages of U2, U3, U5 are in the mV range.

## Consigli per le riparazioni

**Attenzione:(circ.** alimentazione)
**Utilizzare soltanto pezzo originals 3422 06 37 CO 12. Net Elko CO 12 reperibili in commercio deve essere ulteriormente montato un** 0,47uF MKT.

1. **Con lo stadio dl usclta orizzontate staccoto (ad es. coltegamento 2 al TK 60 aperto) e un carico dl sostttuzlone al catodo dl VO 41 (una lampada a 100W),**
   **l'allmentatore deve fornire circa I1100% delle tensioni nominal).**
2. Per la ricerca di errori in caso di funzionamento di sicurezza del blocco dialimentazione, CO 15 essere cavallottato. Se il funzionamento di sicurezza dovesse scattare per via di un sovraccarico transitorio, l'apparecchio pu6 essere rimesso in funzione azionando l'unterruttore principale d'inserzione disinserzione.
3. Controllare che le tensioni continue siano prive di ronzio. Per es la tensione di ronzio di U1 si trova a ca. 4V e non dovrebbe aumentare di morto, in dipendenza della perdita di capacrta CO 42. Le tensioni di ronzio delle rimanenti tension! continue dovrebbero rimanere inferiori a 1V. La tensione di ronzio di U2, U3, U5 si trovano nel campo dei mV.

## Conseils de reparation

Attention: (du bloc secteur de commutation)
Utiliser uniquement la piece originate 3422 06 37 (CO 12). Dans le cas de condensateurs electrochimiques usuels **CO 12** 0,47uF MKT doit etre equipe en **plus.**

1. Lorsque l'etage final horizontal est **deconnecte (par ox. raccordemont 2 sur TK** 60 **ouvert) to bloc •eteur dolt dallvrer** 100% env. des tensions de consigne.
2. Pour la detection d'erreurs en fonctionnement de securite du bloc secteur, il possible de ponter CO 15. Lorsque le fonctionnement **de** surete est declenche a cause d'une surcharge transitoire, l'appareil peut etre remis en marche au moyen du commut. principal de mise en et hors circuit.
3. Veiller a la presence de tensions continues exemptes d'ondulation. La tension d'ondulation de U1 par exemple est de 4V env. et ne devrait pas beaucoup augmenter en raison d'une perte de capacite de CO 42. Les tensions d'ondulation des autres tensions continues devraient toujours etre inferieures a 1V. Les tensions d'ondulation de U2, U3, U5 se srtuent dans la gamme des mV.

# Service-Abgleich / Service Calibration / Taratura di servizio

A o4QI

Service-Mode.

Sie kommen in den Service-Mode, wenn Sie hinterein. am TV-Geber .Taste "i" . "M" und "P" drucken. Service- Mode verlassen^Taste "TV".

- To go to service mode. press the following buttons on the tv transmitter one after the other: "i" . "M" and "P". Service Mode out= button'TV".

• Entrerete nel modo di servizio premendo in sequenza i tasti "i", "M" e "P" sul trasduttore del televisore. Service-mode uscita = tasti "TV".

Taste "M" a Memory
Taste "▲▼" = weiterschalten von Abgleich zu Abgleich/ Switching from calibr. to calibr./ Passaggio da equilibratura ad equilibratura
Taste "◄ ►" = Werte einstellen/ Setting values/ Regolazione dei valori

**U1,** Focus,UG2. AGC (nur bei Multinorm) und ZF werden **nicht im Service-Mode** eingestellt.
U1 , focus, Ug2 ,AGC (only Multinorm sets) and DF are settings not in service mode.
U1, il fuoco ,il Ug2,il AGC (app. Multinorm) e AF sono regolazioni che non nentrano nel modo di servizio.

**r**

**U1** mrt RO 80 auf 150 V ± 0,5 V (110°) **,** 130 V (90°) an CO 42 bei Helligkeit und Kontrast min. einstellen.
- Use **RO 80** to set U1 to 150 V ± 0.5 V (110'-), 130 V (90') at **CO 42** with contrast and brightness min.
- Regolare U1 con RO 80 su 150 V ± 0.5 V(110V"), 130 V ($90^s$) su punto di controllo CO 42 con luminosita e contrasto al minimo.

| Step | Abgl./ Calibr./ Equilibr. | OSD-Anz./ Indicazione | Bemerkung' Remark/ Note |
|---|---|---|---|
| 1 | Vert.Mittenlage<br>Vert. centre position<br>Pos. intermedia verticale | **V.MID-POS...** (46) | Testbildmitte mittig einstellen ( untere Halfte ist schwarz! ).<br>Adjust centre of test picture to a centred pos.( bottom half is black ).<br>- Centrare il centro del monoscopio ( la meta inferiore e nera! ). |
| 2 | Vert.Oberenlage<br>Vert. top position<br>Pos. superiore verticale | **V.TOP-POS...** (43) | Oberen Rand einstellen ( untere Halfte ist schwarz! ).<br>Adjust top edge ( bottom half is black ).<br>Regolrare il margine superiore ( la meia inferiore e ne'a! ). |
| 3 | Vert. Amplitude/ Amp. vert. | **V.AMPL. ..** (38) | Unteren Rand einst./ Adjust bottom edge Regolare il "-largine inferiore. |
| 4 | Hor. Lage/ pos./ Pos. orizz. pos./ | H.SHIFT .. (29) | Testbildmitte mittig einst./ Adjust centre of test picture '.o a centred<br>Centrare il centro del monoscopio |
| 5 | Hor. Amplitude/ Orizz. amp. | **H.AMPL ..** (57) | |
| 6 | Hor. Kissen/ Orizz. cuscinetto | **P.AMPL. ..** (31) | |
| 7 | Hor. Trapez/Orizz. trapezoid. | **P.TILT ..** (31) | |

**FOCUS** mil RK 60 am Hor. Transformatof (oberer Einaeller) auf optimale Scharfe einstellen. / Set focus to optimum definition using RK 60 (Hor.transtormari. Regolare il (uoco sulla nitidezza otiimale con l' RK 60 del trasformatore orizzontale (regolatore superiore).

8,9,10 G2- und Farbtemperalur/ G2- and colour temperature/ G2 e temperatura del colore (Grautreppenies;biid o.a.)

Im Grun-Drive (8). Rot-Drive (10) und Blau-Dnve (9) mit den < > Tasten jeweils den OSD-Weri von 32 einslel!en, Ug2-Einsteller (RK60. ur-erer Einst. am Zeiientrafo) auf Mittenstellung. HeU'gkeitselnst. auf NennhelligKeit fder Scnwarzbalken der Grautreppe dart gerade nicht 'euchten'). Mit Oszilloscop (Tastkoof 100:1) den hdchsien Schwarzwert an den Bildrdhrenkathoden (R.G.B) ermitteln.MIt RK 60 den Wen; dieser Kainode auf 160 V igemessen gegen Masse') einstellenim Grun- Blau- und Rot-Drive mit den -< ^ Tasten in den hellen Partien durch verkleinern der OSD-Werte auf taroneutraies Bild einstellen. Mindestens ein Dnve-Wert solfte aut 32 ble.ben

-Set on OSO value of **32** in each of the following drives: in [he greeni8»-red(l0)-and blue(9) drive, using the < > button RK 60 G2 adjuster to its centre setting. Set brightness adjuster to rated brightness (the black bar of the grey scale must just not be lit upi). Use an oscilloscope (Probe 100:1) to determine Ihe highest black value a; the picture-lube cathodes (R.G.B) Use the RK 80 ad[uster lo sel this value to 160 V. Use 'he < » button to adjust to a coiour.neuira! picture in 'he lichi a'»as in green- blue- and red drive IOSD value must be smaller then 32). At least one of the level controls should be remain at 32.

-Regolare un valore di OSD di 32 di volta nel drive verde (Sl.rosso (10) nel blu (9) con il tasto ^ > . Posizionare RK 60 G2 sulla pos. med'ana. Regolatore de'ia luminosita posizionato sulla luminosita nominale (la linea nera deila scala di tonalita di grigio non deve essere illummata'). Tramite r oscillosccpio. ceterm. il valore del ;ivello massimo del nero (sonda 100-1) sui catodi del dnescopio (R.V B' Co" 'l regolatore RK60 regislrare questo valore su 160 V ( misura a massa' Nel d"ve verde. blu nel rosso. regolare le zone chiare con il laslo **•< >** ad immagine di colore neutro (reg. un valore di OSD < 32). Almeno un regolare dovrebbe restare in posizione 32.

11 OSD SHIFT.. (43)
**12** LNB VOLT .. betr. SAT-Gerate/sets siehe Bedienungsanleitung/ see operating instruction
**13** **LOUDNESS: ..** (on)
14 C4 BIT CHECK: .. (On)
**15** NICAM: ..(on/off)
**16** **CARRIER/MUTE:** ..(off)
**17** **TEXT SYNC AFC2:** ..(off)
**18** VT CHAR: .. (WEST/TURKEY)

**19** AGC. Uber Antenneneingang HF-Signal ohne Tontrager > 5mV auf einem mittl. UHF-Kanai einspeisen In den Sen/Ice-Mode gehen iSiehe Kapitel "Sen/ice-Mode"). Mil Taste A aut OSD-Anzeige "AGC" stellen. Oscilloscop iBanObreite>50 MHz) an Tuner-ZF-Ausgang Testpunkt TL 01 Oder TL 02 und Masse ansch;ie3en. Die gelbe Tas'e am Geber drucken (OKAY) . Mit Taste •*> aut 450mVss ± 50 mV bezogen auf die Synchronspitzen des Signales einstellen. Mil M-Taste Wen aosoeicrern.

- Feed in RF signal without sound carrier with >5 mV on a medium UHF channel via the aerial input. Go to service mode (see section ef: '.led "Service moce"). Use button A to set the OSD to "AGC". Connect oscilloscope (bandwidlh>50 MHz) to the tuner's IF output |TL 01 or TL 02| and to ground. Press the yellow button **at** the pick- uo. **Use** button •<» to adjust to 450mVpp ± 50 mV with reference to the signals synchronizing peaks. Use the "Memory" button to store the value in memory

-Tramite I' ingresso dell' antenna, immettere il segate HF senza portante audio con >5mV su di un canale UHF (a trequenza ul'raelevata intermedio. Entrare nel modo di servizio ( ved. il capltolo " Modo dl servizio"), Regolare sull'Indicaz'one OSD "AGC" con il tasto A. Collegare I'oscilloscopio flarghezza di oanda >50 MHz) a'l'jscita 2F del sinionizzatore (TL 01 ed TL 02) ed a massa. Premere il lasto giallo sul Irasduttore. Regolare su 450mV ± 50 mV facento nfenmentoai piccni di sincronismo del segnale premendo il tasto ^>. Memonzzare Il valore premendo il tasto **"M"**

**19** AGC (Multinorm sets) Uber Antenneneingang HF-Signal ohne Tontrager > 5mV auf einem mini. UHF.Kanal einspeisen Oscilloscop (Bandbreile>50 MHzl an Tuner-ZF.Ausgang Testpunkt TL 01 Oder TL 02 und Masse anschlieBen. Mil RL 217 iMullinorm.Mooull auf 4SOmVss ; 50 mV bezogen auf die Synchronspitzen des Signales einstellen.

- Feed in RF signal without sound carrier with >5 mV on a medium UHF channel via the aerial Input, Connect oscilloscope (bandwidth>53 MHz) to the tuner's IF output (TL 01 or TL 02) and to ground. Use **RL** 217 (Mullinorm-Modul) to adjust to 450mVpp ± 50 mV with reference to Ihe signals synchronizing peaks.

-Tramite I' ingresso dell ' antenna, immettere il segale HP senza ponante audio con >5mV su di un canaie UHF (a frequenza ultraeteva'a intermedio. Cofleca'e I'oscilloscopio (larghezza di banda >50 MHz) all'uscita ZF del sintonizzalore (TL 01 eo TL 02) ed a massa. Premere il lasto giallo sul Irasdullore Regolare su 450mV ± 50 *T'\i* facenio hferimentoal piochi di s*ncronismo del segnale premendo il **RL 217** (Multinonn-Modul).

## Equilibrage de service

Mode de service.
Pour activer le mode de service, appuyez consecutivement sur les touches "I", "M" et "P" du detecteur TV. Abandon du mode de service = louche "TV".
Touche "M" = memorisation
Touche "A T" = passage d'un equilibrage a l'autre
Touche "•<»"= reglage des valeurs
U1, le foyer et UG2 ne sont pas regles en mode de service.

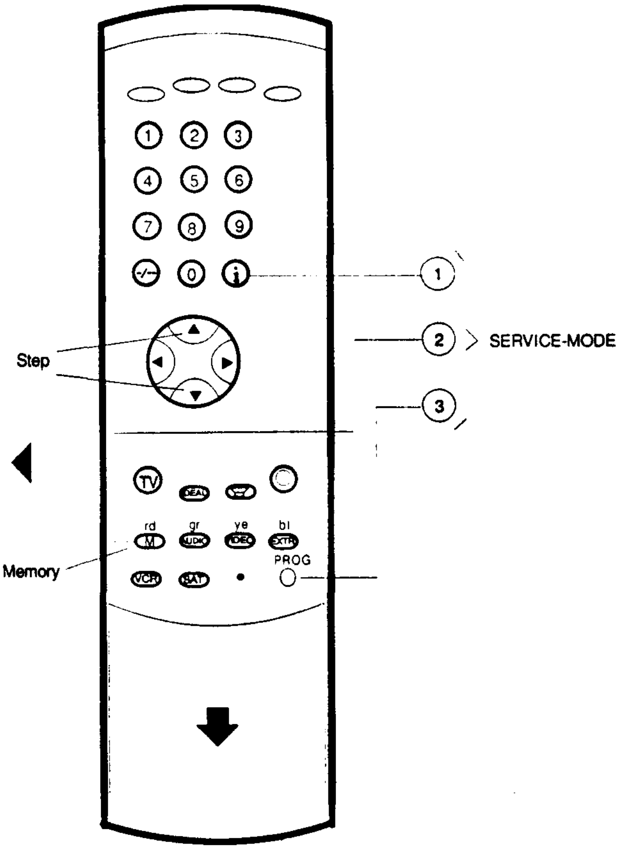
Reglez U1 sur 150 V +/- 0.5 V (110-), 130 V (90$^s$) au point de controle CO 42 a luminosite et contraste min. et ce, a l'aide de RO 80.

| **Etape** | Equilibrage | Indication OSD | Remarque |
|---|---|---|---|
| 1 | Position vert. centrale | V.MID-Pos. .. (46) | Ajustez le centre de la mire sur une pos. centrale(la partie infer, noire). |
| 2 | Pos. vert. superieure | V.TOP.Pos. .. (43) | Ajustez la marge superieure (la partie inferieure est noire). |
| 3 | Amplitude vert. | V.AMPL. .. (38) | Ajustez la marge inferieure. |
| 4 | Position hor. | H.SHIFT .. (29) • | Ajustez le centre de la mire sur une **position** centrale. |
| 5 | Amplitude hor. | H.AMPL .. (57) | |
| 6 | Coussin hor. | P.AMPL. .. (31) | |
| 7 | Traptee hor. | P.TILT.. (31) | |

Ajustez le foyer sur nettete optimale avec RK 60 du transformateur (ajusteur superieur).

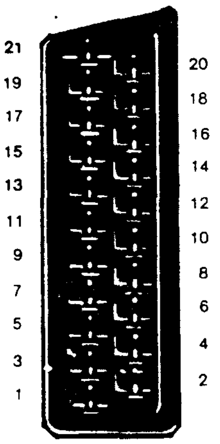
**8,9,10** G2 et temperature de couleurs (mire de demi-teintes).
Reglez la valeur OSD de 50 en drive vert (8). en drive rouge (10) et en drive bleu (9) au moyen des touches •<>•. Ajusteur Ug2 (RK 60. ajusteur inferieur du transformateur de lignes) sur position centrale. Ajusteur de luminosite sur luminosite nominal$^0$ fla barre noire de l'echelle des demi-teintes ne doit juste pas etre allumee !). Determinez la valeur de noir maximale aux cathodes du tube image (R. V. B) au moyen de l'oscilloscope (bouton test 100:11. Reglez la valeur de cette cathode sur 165 V (mesuree centre la masse) a l'aide de RK 50. En drive vert. bleu et rouge, reglez sur image neutre en couleurs dans les parties claires en diminuant les valeurs OSD a l'aide des touches <»•. Au moins une valeur drive devrait demeurer sur 50.

**11** OSD SHIFT .. (43)
**12** LNB VOLT .. app.SAT
**13** LOUDNESS: .. (on)
**14** C4 BIT CHECK: .. (on)
**15** NICAM: .. (on/off)
**16** CARRIER/MUTE: .. (off)
**17** TEXT SYNC AFC2: .. (off)
**18** VT CHAR: .. (WEST TURKEY)
**19** **AGC** Alimentez le signal HP sans support sonore via l'entree d'antenne avec 5 mV +,'- 2 mV sur un canal UHF moyen.
Raccordez l'oscilloscope (bande > 50 MHz) a la sortie F.I. du tuner, point test TL 01 ou TL 02 et masse.
Reglez sur 450 mVcc +;- 50 mV par rapport aux cretes synchrones du signal en actionnant la RL 217.



Tastenbelegung der IR-Sender bei Service-Betheb.
Infrared remote gun functions in Service mode.
Occupation des touches de l'emetteur IR en mode de fonctionnement service
Occupazlone del tasti des Irasmertitora a raggi infrarossi in lunzionamento dl servizio.

### Euro-AV-Buchse / SCART socket
### Prise Euro-AV / Presa dl Perftelevislone



1 Audio B Ausgang / output / sortie / uscita
2 Audio B Eingang / input / entree / entrata
3 Audio A Ausgang / output / sortie / uscita
4 **Masse** / earth / masse / massa
5 Blau, Masse / blue, earth / bleu. masse / massa. bkJ
6 Audio A Eingang / input / entree / entrata
7 **Blau** / blue / **bleu / blu**
8 Schaltspannung / switching voltage / tension de commutation / commutazione di **funzlone**
9 Grun, Masse / green, earth / vert. masse / massa verde
10 Datenleitung 2 / data line 2 / ligne de donnees 2 / non collegato
11 Grun / green / vert / verde
12 Datenleitung 1 / data line 1 / ligne de donnees 1 / non collegato
13 Rot. Masse / red. earth / rouge, masse / massa rosso
14 **Masse** / earth / masse / massa
15 Rot / red / rouge / rosso (Chroma-Sign. / **Chroma sign. /** Sign. de chrominance / Segn. cromal
16 Austastsignal / blanking signal / signal de suppression / cancellazione
17 Video Masse / video earth / masse video sortie / massa video
18 Austastsignal Masse / blanking signal earth / masse wdeo entree / massa cancellazione
19 Video Ausgang / output / sortie / uscita
20 Video Eingang / input / entree / enlrata (Luminanz-Sign. / Luminance sign. / Sign. de luminance / Segn. Lufflinanza)
21 Abschirmung und/oder Masse Leitung / shielding and/or earth lead / blindage et/ou masse ligne / massa comune

## Bild- Referenz- Abgleich (ZL 22, Chassis 5864 43 01..06, 5864 43 21..23)

1. Programmtaste drucken.
2. Mit Curser •»>• auf "TV-Prog" stellen.
3. Mit den Zifferntasten einen mittleren Kanal z.B. Kanal **38** (607,25 MHz) eingeben.
4. Mit der **grunen** Taste auf "TV Frequency" stellen.
5. Mit Curser *A* (T) auf" AFC off" und dann mit Curser <^ auf "AFC **on"** stellen.
6. Mit **ZL 22** auf 607, **25** MHz stellen ( auch bei anderen Kanalen immer auf "25" einstellen).

## **Ton- ZF- Abgleich** (ZL 02, Chassis 5864 43 01..06, 5864 43 21..23))

Testbild einspeisen. Oscilloscop an Pin **12** vonn TDA 2545 anschlieBen. Mit **ZL 02** auf min. Bildinhalt abgleichen.

## Picture reference calibration

1. Press the program button.
2. Use curser •<>• to set "TV-Prog"
3. Use the numbered buttons to enter one of the middle channels, e.g. Channel 38 (607.25 MHz)
4. Use the green button to set "TV frequency".
5. Use cursor A (T) to set "AFC off", and then **cursor <^ to set "AFC on".**
6. Use ZL 22 to set 607.25 MHz (even with other channels, always set to "25").

## Audio IF calibration

Feed in the test picture. Connect an oscilloscope to Pin 12 of TDA 2545. Use ZL 02 to calibrate the min. picture content.

## Equilibratura di riferimento del quadro

1. Premere il **tasto di programme**
2. Posizionare su"TV-Prog" con il cursore-o-
3. Con i tasti numerici. immettere un canale intermedio, ad esempio il canale 38 (607,25 MHz).
4. Posizionare su "TV Frequency" con il tasto **verde.**
5. Posizionare su "AFC off" con il cursore A (T) e su "AFC on" con il cursore <».
6. Posizionare su 607,25 MHz con ZL 22 (sintonizzare su "25" anche per gli altri canali).

## Equilibratura dell'audio di frequenza intermedia

Alimentare il monoscopio. collegare l'oscilloscopio al pin 12 del **TDA 2545. Compensare sul min. contenuto d'imrnagine con ZL 02.**

## Equilibrage d'image de reference

1. Appuyez sur la louche de programme.
2. Ajustez "TV-Prog" au moyen du curseur **<»•.**
3. Entrez un canal moyen. p. ex. le canal 38 (607.25.MHz) au moyen des touches numeriques.
4. Ajustez "TV Frequency" a l'aide de la louche verte.
5. Ajustez "AFC off" au moyen du curseur A iVi. puis "AFC on" a l'aide du curseur •<»-.
6. Ajustez 607,25 MHz au moyen de ZL 22 (reglez toujours sur "25" egalement dans le **cas d'autres canaux).**

## Equilibrage du son **F.I.**

Alimentez la mire. Raccordez l'oscilloscope a la broche 12 du TDA 2545. Equilibrez sur contenu d'image min. a l'aide de ZL 02.

**Achtung!** Bei Reparaturen gultige Sicherheitsvorschriften beachten.
Rontgenverordnung: Die in der Rontgenverordnung festgelegte Ortsdosisleistung ist bei diesem Gerat durch die Bildrohrentype und die maximal zulassige Hochspannung gewahrleistet. Die Hochspannung darf maximal 28 RV betragen. Die Hochspannung liegt im zulassigen Bereich, wenn die Betriebsspannung der Horizontal-Ablenkstufe bei minimalem Strahlstrom 150 V ± 0.5 V (110°) 130V (90$^{s}$) betragt. Bei Reparaturen ist die Spannung zu uberprufen und gegebenenfalls mit RO 80 auf Sollwert einzustellen.

Warning! Service and repair work to be performed only in accordance with existing safety regulations.
X-ray regulations: The picture tube type and the maximum permissible high-voltage ensure that the **X-ray** intensity within the set remains far below the permissible value.
The high-voltage must not exceed 28 kV. The high voltage is within the permissible limits when the operating voltage of the horizontal deflection stage equals 150 V ± 0.5 V (110°)
130V (90°)at minimum beam current. Following servicing, check and adjust this voltage to the nominal value with RO 80.

Attention! En cas de reparations, tenir compte des regles de securite en vigueur.
Reglementation portant sur les rayons X: La puissance de dose locale fixee dans la reglementation relative aux rayons X est garantie dans le cas de cet appareil grace au type de tube-image et a la haute tension maximale admissible. La haute tension ne doit pas depasser un maximum de 28 kV. La haute tension se situe dans une zone admissible lorsque la tension de service de l'etage de convergence horizontale s'eleve a 150 V ± 0,5 V (HO$^{3}$) 130V *(90")* pour un courant de faisceau minimal. En cas de reparations, la tension doit ete controlee et. le cas echeant, etre ajustee sur la valeur de consigne au moyen de RO 80.

SchutzmaBnahmen fur **MOS-** Bauelemente beachten!
Pay attention to protective measures for MOS components!
Respecter les mesures de protections pour les composants de **MOS!**
Osservare le misure protettive per gli elementi costruttivi MOS!

## Kurzbedienungsanleitung

### Sender-Programmierung

Automatischer Suchlaul **(APS):** Speicherplatz **(z.B.** 1) **wahlen. Taste AUTO (IR-Sender) drucken. Die APS-Funktion speionert aile ortlich zu empfangenden** Pemsehprogramme. **Mit** der Taste TV zum allgemeinen Fernsehempfang zuruckschalten.

Manuelle Abstimmung: Taste PRG drucken; mit Cursor-Taste > Funktion aktivieren. Mit der **grunen Taste** kann **eine** Frequenz- od. Kanalnummem-Anzeige aufgerufen werden. Frequenz mit Cursor-Taste < ' > abstimmen. Mit der roten Taste M absoeichem u. mit der Taste **TV** zum allgemeinen Fernsehempfang zuruckscnalten.

Feinabstimmung (FINE TUNE): Taste PRG drucken: mit Cursor-Taste ^ Fun^ion aktivieren und mit cer grunen **Taste** Kanal-Anzeige aufrufen Uber FINE TUNE Kanalfrea. feinabst.

Umsch. der Kanattabelle (TAB): Taste PRG drucken; mit Cursor > Funktion aktiv. und mit der grunen Taste Kanal-Anzeige autrufen. Mit der Funkt. TAB Tabelle A od. B wahlen.

### Sender sortieren

Taste PRG drucken. mit Cursor-Taste T die Funktion **SORT** wahlen und mit Cursor-Taste > akiivieren; der Speicherplatz 1 wird automatiscn angewantt. Mit Cursor-Taste •< •' > das zu speichernde Programm wahlen. Mil der **roten Taste M** abspeiohem; gteicnzeitig **wird der nachste Speicherplatz** angewahfl.

### Schrittweise Programmwaht

Die Programmplatze 1 -99 schrittweise **mit den Tasten P A / V am Gerat Oder mit der Cursor-Taste A / V durchschalten.**

### **Bildeinstellungen**

Bildformat. Farbe, Helligkeit. Kontrast u. Schartc: Taste VIDEO iIR-Sender) drucken. Mit Cursor-Taste A / T Einstetlfunktion wahlen. Mil der Cursor.Taste <(-) / K+) einstellen. Mit der Taste TV zum aUgerreinen Fernsehemotang zuruckscriaiten. ''

Idealbildeinsteltungen (Farbe,Helligkeil.Kontrast.ScharfeJ: Mil IDEAL-Tasie Ideal-Einstellfunbktionen wahlen; Taste **VIDEO** drucken. Mil Cursor-Taste A / V Einstellfunkiion wahlen und mit Cursor-Taste ^(-) / >•(+) einsteHen. Mit der roten Taste M speichern und mH der Taste **TV** zum allgemeinen Fernsehempfang zuruckschalten.

### Toneinstellungen

**Lautstarktt:** Cursor-Taste ^(-) / ^(+), **Wird die** Stummscnaltung **(Laut»pr»cher-T«ste)** betatigt. kann mit **der Cursor-T««te ein angeschlossener** Kopmorer **geregelt werden.**

## Summarized operating instructions

### Station programming

Automatic program search (APS): select memory location (e.g. 1). Press the **AUTO** button (IR transmitter). The APS function will **store in memory all** TV programs which **can be** received at the TV set's location. To switch back to general TV reception, press the TV button.

Manual tuning: press the **PRG** button, use the > cursor button to activate the function. You can use the **green button** to call up a frequency or channel number display- Use the *4 1* ^ Cursor buttons to tune the frequency. To store in memory, press the red button M. and lo switch back to general TV reception, press the TV button.

FINE TUNE: press the PRG button; use the >• cursor to act. the fund.. and the green button to call up the channel display. Use the FINE TUNE fund. to fine-tune the channel freq.

Switching over the channel table (TAB): press the PRG button; use the > cursor button to activate the function, and the green button to call up the channel number display. Use the **TAB** function to select Channel Table **A** or **B.**

### **Sorting stations**

Press the PRG **button,** use the T cursor button to select the **SORT** function and activate it with cursor button > *:* memory location 1 **will be** automatically selected. Select the program you want to store with cursor button **•< -' >** *.* Use the red button M to store in memory; the next memory location will be selected at the same time.

### Slep-by-step program selection

Switch through program memory locations 1 - 99 **step by step.** using buttons **P A / V at the set or cursor button A / V .**

### **Adjusting the picture**

Picture format, colour, brightness, **contrast and** sharpness: press the VIDEO button (IP transmitter). Use the A / V cursor button **to** select the adjusting **function, and** cursor button **<<** (-} and/or cursor button > (+) to adjust. To switch back to general TV reception, press the TV button.

**Ideal** picture settings (colour, **brightness,** contrast, **sharpness):** use the **IDEAL** button to select the ideal adjusting functions: **press** the **VIDEO** button. Use the A / V cursor button to select the adfusting function, and **cursor** button •<(•) and/or **cursor button** ^(+) **to** adjust. To **store** in memory, press the red button M. and to switch back to general TV reception, **press** the **TV** button.

### **Adjusting the sound**

Volume: cursor button 4 and/or **cursor button > *.* When you** operate **the** muting fund. **(loudspeaker button), you** can **use the cursor button to adjust the vol. tor a conn. set ol** earph.

## **Mode d'emploi abreg6**

### Programmation **des** emetteurs

- Recherche automatique (APS): Selectionnez l'emplacement de memoire (p. ex. 1). Appuyez sur la louche **AUTO** (emetteurs **IR).** La **lonction APS** memorise **tous les** programmes de television pouvant etre recus dans votre region. Appuyez sur la louche TV pour passer a la reception de television generale.

  **AJustage** manuel: Appuyez sur la louche PRG. activez (a fonction au moyen de la louche de curseur ^ . La louche **verte** vous permet d'appeter l'atfichage d'une (requ. ou d'un numero de canal. Ajustez la frequ. a l'aide de la touche ^ / > *.* Memonsez au mcyen ce la louche **rouge M** et appuyez sur la louche TV pour passer a. la reception de television generale.

  **Ajustage** fin (FINE TUNE): Appuyez sur la louche **PRG:** activez la fonction a l'aide de la touche **de** curseur **> et** appelez l'affichage des numeros de canal au moyen de la **louche verle.** Procedez a l'ajustage (in de la frequence de canal par FINE TUNE.
- Changemeni du tableau **des** canaux (TAB): Appuyez sur la touche **PRG:** activez la fonction a l'aide de la touche de **curseur > et** appelez l'affichage **des** numeros de canal au **moyen de** la **louche verle,** Selectionnez ie tableau des canaux A ou B au moyen ae la fonction **TAB.**

### **Triage des emetteurs**

- Appuyez sur ta touche **PRG.** selectionnez la fonction **SORT** au moyen **de** la touche **de curseur** T et activez-la par la touche de **cursaur** ^ ; it y a aulomatiquement selection **de** l'emplacement de memoire 1. Selectionnez le **programme a memoriser a l'aide de la louche de curseur < / > *.* Memorisez-le en appuyant sur la louche rouge M; il y a automatiquement** selection **de** t'emplacement de memoire **suivant.**

### **Selection consecutive des programmes**

- Selectionnez consecutivement les emplacements **de** programme 1 -99 en appuyant sur **les** touches P A / V ou sur **la** touche de **curseur A / V .**

### Reglage de l'image

**Format d'image. couleur, luminoslte, contraste et nettete:** Appuyez sur la touche **VIDEO** (emetteurs IR). Selectionnez la fonction **de reglage a l'aide de la touche de curseur A / T .** Reglez au moyen de la touche de curseur <(-) / *>{+).* Appuyez sur 'a louche TV pour passer a >a reception de television generale.

Reglage d'image ideal (couleur, luminosite. contraste, nettete): Selectionnez les fonctions de reglage ideal par la touche IDEAL, appuyez sur la touche VIDEO. Selectionnez la fonction de reglage a l'aide de la touche de curseur A / V et realisez le reglage au moyen de la louche de curseur •<(-) / *>(+).* Memonsez a. l'aide oe la louche rouge M el appuyez sur la touche **TV** pour **passer** a la reception **de** television generale.

### **Reglage du son**

- Volume sonore; Touche de curseur < >*.* Lorsque vous supprimez le son (touche de haut-parteur), un casque d'ecoute raccorde peut etre regle au moyen de la louche de curseur.

## Istruzioni per l'uso riassuntive

### Programmazione delie emittenti

- Ricerca automatica (APS): selezionate una memoria (ad esempio 1). Premele 11 tasto **AUTO** (telecomando). **A questo** punto, la **funzione APS memorizza** tutti i programmi televistvi local! che si possono ncevere. Commutate nuovamente sulla ricezione televisiva standard premendo il tasto **TV.**
- Sintonizzazione manuale: premete il tasto PRG: attivate la funzione premendo il taslo cursore > . Con il **tasto verde e** possibile ricniamare 1'indicazione della frequenza oppure del numero di canale. Sintonizzate sulla frequenza desiderata con il tasto cursore < ' ^ , Memohzzale le operazioni premendo ll **tasto rosso M e** ncommut. suEla ric- telev. stand- prem. i! **TV.**
- Sintonizzazione fine (FINE TUNE): premete il tasto **PRG:** attivate ia funzione premendo il tasto cursore > e nchiamate l'indicazione del numero di canale con il **tasto verde.** Regelate la Sintonizzazione della trequenza del canaie tramite **FINE TUNE.**
- Commutazione delle tabelle del canali (TAB): premete il tasto PRG; attivate la funzione premendo il tasto cursore > *e* nchiamate l'indicazione dot numero di canale con il tatto verde. Selezionate la tabeita **dei** canali **A oppure B** con la **funzione TAB,**

### **Selezione delle emittenti**

- Premete il tasto PRG, quindi selezionate la funzione SORT premendo il tasto V ed attivatela con il tasto cursore **>•***;* a questo punto, verra seleaonaia aulomaticamente la memoria 1. Setezionate il progr. che desiderate memorizzare **premendo** il tasto •< / ^ . **Memorizzate** le **operaz.** premendo il **tasto rosso M. La memoria suoc.** verra **selez.** contemporaneamente.

### **Selezione** graduale del **programma**

- Scorrete gradualmente le memorie di programma **da 1 a 99** con i tasti P A / V present! sull'apparecchio **oppure** con il **tasto cursore** A / V .

### Regolazioni video

- Formato schermo. **colore, luminosHa, contrasto e nitldezza:** premete il tasto **VIDEO** (telecomando). Selezionate la funzione di regolazione con il tasto cursore A / V e regolatela con it tasto cursore •<(-) / _>{-*•)_• Ricommutate sulla ncezione televisiva standard premenoo ll tasto TV.
- **Regolazioni video ideal! (colore, luminosita, contrasto.** nitldezza): seiezionate le funzioni di regolazione ideaie premendo il taslo **IDEAL,** quindi premete il tasto **VIDEO.** Scegliete la funzione di regofazione con il tasto **cursore** A / V e regolatela con it tasto cursore <(-) / ^(+). Memonzz. le operaz- prem. il lasio rosso M e ricomm. sulla ncez. telev. stand,prem. il TV.

### **Regolazioni audio**

- **Volume: tasto** cursore <(-) / »•(+). **Qualora attivaste** la **soppressione** dell audio **(tasto con l'al(oparlanle). con** it **tasto cursore** sara **possibile regolare** le cuffie **collegate** aH'apparecchio.

# Ersatzteile/ Replacement parts list/ Pieces de rechange/ Elenco delle parti di ricambio

A

Sichefherlsbaufll im Sinn« der Sicherheitsbestmimungen. Diese Teile durfen nur durch Originalteile ersetzt werden f
Sclety components in accordance with existing regulations. These components must only be replaced by original component parts !
Compount d« •«cum» contormement aux reglementations de securite, Ces composants doivent etre uniquement remplaces par des pieces d'origine* f
Component! dl •Jcurezu ai sensi del regolamento di sicurezza. Queste componenti devono venir sostituite unicamente con parti onginalt *

| Gegen»Und<br>rtem<br>PHc*<br>mcwM | | | Bostell-Nr.<br>Order no.<br>Node com.<br>No. dl rii. | |
|---|---|---|---|---|
| | SALORA 21 T 6 | A | 5434 86 30 | |
| | SALORA 21 T 7 | B | 5432 02 00 | |
| | SALORA 25 T 6 | C | 5434 86 00 | |
| | OCEANIC 5554 | 0 | 5432 24 00 | |
| | NOKIA 5575 UK SFN | E | 5432 27 40 | |
| | OCEANIC 5575 | F | 5432 28 20 | |
| | NOKIA 6355 VT | G | 5434 87 40 | |
| | NOKIA 6355 NICAM | H | 5434 87 60 | |
| | OCEANIC 6355 | 1 | 5434 88 30 | |
| | NOKIA 6365 VT EE | J | 5433 27 50 | |
| | NOKIA 7155 VT | K | 5434 89 00 | |
| | NOKIA 7155 NICAM | L | 54348920 | |
| | OCEANIC 7155 | M | 54349040 | |
| | NOKIA 7165 SAT | N | 54332650 | |
| | NOKIA 7165 UK SFN | 0 | 54332610 | |
| | NOKIA 7165 VT EE | P | 54332620 | |
| (1) | Gehlur/ Case/ Boitier/ Scatota | | | |
| | A | | 84104051 | |
| | B/E/F | | 84103831 | |
| | C | | 8410 40 80 | |
| | D | | 84103901 | |
| | Q/H | | 841041 40 | |
| | 1 | | 841041 50 | |
| | J | | 84103690 | |
| | K/L | | 841041 10 | |
| | M | | 84104120 | |
| | WW | | 84103650 | |
| < 2) | BlldrAnr*/ Pict lube/ Tube cathod./ Cinescopio | | | |
| | A/B/0/E/F | A 51 ECO 10x01 | 4362 21 08 | |
| | C/J | A59ECF10x05 | 43622560 | |
| | G/H/1 | A59EAF10x01 | 43642504 | |
| | K/l/M | A66EAF10x01 | 43642804 | |
| | N/O/P | A 66 EOF 20x05 SO | 4364 28 05 | |
| (3) | Haken/ Hook/ Agrafe/ Gando<br>- Emmagn.-Spule/ Degaussing coil/ Bobine de desaimantation/ Bobina di smagnetizzazione | | | |
| | A/B/C/D/E/F/G/H/1/J/K/L/M/N/O/P | | 8448 04 70 | |
| ( 4) | Schraube/ Screw/ Vis/ Vite<br>• Blldrohre/ Pia. lube/ Tube cathod./ Cinescopio | | | |
| | A/B/D/E/1/M | 7x32 | 7864 02 30 | |
| | C/G/H/JW/L/N/0/P | 7x28 | 7864 02 21 | |
| | F | 7x32 | 7864 02 33 | |
| (5) | Enlmagn.-Spul*/Degaussing coil/ Bobine de desaimantation/ Bobina di smagnetizzazione | | | |
| | A/B/D/E/F | | 45880811 | |
| | C/G/H/1/J | | 45880813 | |
| | K/L/M/N/0/P | | 4588 08 14 | |
| (f) | Erdung\Blldr6nre / Earthing\Picture lube / Mise a la lerre\Tube cathodique / Messa a terra\Cinescopio | | | |
| | A/B/C/D/E/F/G/H/1/J/K/bM/N/O/P | | 6141 03 50 | |
| ( 7) | Blldrohr«npl«ne/ Board for picture tube/ Plaque du tube d'image/ Piastra del dnescopio | | | |
| | A/B/D/E/F/K | | 5858 20 60 | |
| | C/G/H/L/0 | | 5858 20 72 | |
| | I/J/M/N/P | | 5858 20 62 | |
| (8) | Hochspannungskabel / High-voltage cable / Cable de haute tension / Cavo d'alto tensJone | | | |
| | A/B/C/D/E/F/G/H/1/J/K/L/M/N/O/P | | 48886245 | A |
| < 9) | Chassis / Chassis/ Basamenio | | | |
| | A/8 | STEREO PLUS BG N 90" | 5864 43 04 | |
| | C | STEREO PLUS BG N 110° | 5864 43 03 | |
| | tXF | STEREO PLUS MULTINORM 90° | 58644310 | |
| | E | STEREO PLUS 1 N 90' | 5864 43 06 | |
| | Q/K | STEREO PLUS BG 110° SO | 5864 43 21 | |
| | H/L | STEREO PLUS BG N 110° SQ | 5864 43 22 | |
| | 1/M | STEREO PLUS MULTINORM 110° SO | 5864 43 25 | |
| | J/P | STEREO PLUS MULTINORM 110° | 5864 43 07 | |
| | N | STEREO PLUS 110° SAT N | 58644312 | |
| | 0 | STEREO PLUS IN 110° | 5864 43 OS | |
| (10) | Milter/ Holder/ Support/ Sostegno<br>- Chassis / Chassis/ Basamento | | | |
| | A/C/D | | 8440 05 01 | |
| | B/E/F/G/H/I/J/K/L/M/N/O/P | | 8440 05 31 | |

| Gegenfnd<br>Item<br>Plec*<br>Rlumbl | | | Bnmi-Nr.<br>Order no.<br>N o d« com.<br>No. dl rif. | |
|---|---|---|---|---|
| (11) | Ruckwand/ Rear cover/ Panrrau amere/ Muro postefiore | | | |
| | A/D | | 8430 1830 | |
| | B/E/F | | 8430 1010 | |
| | C | | 8430 1560 | |
| | G/H/1 | | 8430 1930 | |
| | J | | 84301710 | |
| | K/L/M | | 8430 1920 | |
| | N/O/P | | 8430 t690 | |
| (12) | Schraube/ Screw/ Vis/ Vite<br>- Ruckwand/ Rear cover/ Panneau arriere/ Muro posteriore | | | |
| | A/B/0/E/F/G/H/I/J/K/L/M/N/O/P | 4x20 | 7874 38 26 | |
| | C | 4,5x18 | 78743815 | |
| (13) | Abdeckung' Covering/ Couverde/ Copenura<br>- Chassis / Chassis/ Basamento | | | |
| | B/E'F/I/J/M/O/P | | B440 05 51 | |
| | G/H/K/L | | 8440 05 60 | |
| | N | | 84400531 | |
| (14) | Lautsprechergitter/ Loudspeaker grille/ Grille pour haut-parleur/ Griglla dell'attopananf | | | |
| | A/0 | | 8460 16 10 | |
| | B/E/F | | 8464 05 70 | |
| | C | | 8460 1790 | |
| | G/H/I | | 8460 20 00 | |
| | J | | 8464 05 60 | |
| | K/L/M | | 6460 1960 | |
| | N/O/P | | 84640550 | |
| (15) | Lautsprecher/ Loudspeaker/ Haut-parleur/ Altoparlante | | | |
| | A/C/D | | 43120001 | |
| | B/E/F | 8(110W | 4311 34 60 | |
| | G/H/1/K/L/M | 8tl 10W | 4311 2886 | |
| | N/QW | 80 10W | 43112883 | |
| (16) | HaMerdir/Fixing spring/Ressort de fixation/ Molla di ritegno | | | |
| | N/O/JfP | | 84800010 | |
| (17) | Blend*/ Screen/ Cache/ Diaframma | | | |
| | A/C/D | | 8455 06 30 | |
| | B/E/F'N'0/J/P | | 8448 10 20 | |
| | G/H/1/K/L/M | | 8455 1 1 20 | |
| (18) | Schrltuug/Logo/Graphisme/Oenominazone | | | |
| | A/C | SALORA | 8470 09 50 | |
| | B | SALORA | 8470 04 20 | |
| | B/E/F | NOKIA | 8470 01 40 | |
| | E/G/H/J/K/UN/0/P | NOKIA | 8470 03 80 | |
| | D/F/I/M | NOKIA OCEANIC | 84701331 | |
| | J | NOKIA TEC | 8470 14 50 | |
| | N/0 | ITT DIG | 8470 07 30 | |
| | P | NOKIA TEC | 8470 01 50 | |
| (19) | Tuner/ Sinlonizzatore | | | |
| | A/B/D/E/F/G.'H/1/J/K/L/M/N/P | HYPERBANO SALCO | 5823 10 12 | |
| | C/0 | HYPERBAND | 5823 10 14 | |
| (20) | Netztaste ' Mains press button / Cfe de secteur / Tasto di rete elettrica | | | |
| | A/D | | 8468 02 80 | |
| | B/E/F/J/N/0/P | | 8468 03 00 | |
| | C | | 84680271 | |
| | G/H/1/K/L/M | | 84680310 | |
| (21) | Druckfeder/ Pressure spring/ Ressort de pression/ Molla di compressione<br>- Netztaste / Mains press button / Cle de secteur / Taslo di rete elettrica | | | |
| | A/B/C/D/E;F;G/H/1/J/K/L;M/N/0'P | | 735254 10 | |
| (22) | Tastensatz/ Key set/ Clavier/ Tasliera<br>- (4(ach\| (4fold) (41ois) (4volte lanto) | | | |
| | A/C/D | | 4188 1051 | |
| | B/E/F/G/H/I/J/K/L/M/N/O/P | | 4188 1090 | |
| (23) | Netzschalter / Main switch / Interrupteur secteur / Interruttore di rete elettrica | | | |
| | A/B/C/D.'E/F/G/H/1/J/K/L/M/N/O/P | SE01 | 41210002 | |
| (24) | SIcherung / Fuse / Fusible / Fusibile 2,5 AT | FE01 | 43751251 | A |
| | SIcherungshalter / HolderVFuse / Supporl'Fusible / Sostegno'.Fusibile | FE02 | 41570485 | |
| (25) | Kopfhdrerbuchse/ Headphone socket/ Douitle pour casque/ Presa di ricevitore a cunia | | | |
| | A/B/C/D/E/F/G/H/1/J/K/UM/N/O/P | SE03 | 41441121 | |
| (26) | IR-Verstarker/ IR amplifier/ Amplificateur IR/ Ampliticalore IR | | | |
| | A/B/C/D/E/F/G/H/I/.MVUM/N/O/P | AE 01 | 5888 09 74 | |

| | | | |
|---|---|---|---|
| **(27)** Scharler/ Switch/ CommLrtateur/ Commutalore | | | |
| **- (4t»ch)** (4told) (4lois) (4volte tamo) | | | |
| A/B/C/D/E/F/G/H/IAVK/L/M/N/0/P | SE 02 | 41150685 | |
| **(28)** **Aufbaurafman/** Mounting frame/ | | | |
| **Cadre** de montage/ Inlelaiatura **di montaggio** | | | |
| - Bedlentall / Operating unit / | | | |
| Bloc de commandos / Unrta di comando | | | |
| A/C/D | | 84480980 | |
| B/E/F/N/0 | | 84460481 | |
| G/H/K/L | | 84460530 | |
| *VU* | | 84460531 | |
| J/P | | 84460482 | |
| **(29)** **Netzkabel/** Mains cable/ Cable **sacteur/** | | | |
| *Cam* per rele elettrica | | | |
| A/B/C/D/F/H/1/J/L/M/P | | 46886656 | A |
| BO | | 4131 2526 | & |
| G/K/N | | 4131 25 13 | A |
| **Abtenkk.b*!/** Deflection cable/ **Cable de deviation/** | | | |
| **Cavo** di deviaaone | | | |
| A/B/C/D/E/F/G/H/1/J/K/L/M/N/O/P | kpL/compl. | 48886457 | A |
| **Kabel/** Cable/ Cable/ Cavo | | | |
| • **Lautsprechar/** Loudspeaker/ | | | |
| Haut-parieur/ Altoparlante | | | |
| A/C/0 | | 4688 GS 08 | A |
| B/E/F/G/H/1/J/K/L/M/N/O/P | | 46886907 | A |
| **- (7pol.)** (7pole) (7poles) (7polare) | | | |
| A/B/C/O/E/F/I/J/M/N/O/P | | 46688046 | A |
| **Bad.'Anlenung** / Operating instnJCtions / | | | |
| Mode d'emploi / Instruzioni per I'uso | | | |
| A/B/C | | 66126354 | |
| D/F | | 661263 ia | |
| *Em* | | 66126315 | |
| ***Q*** | | 6612 63 57 | |
| H/L | | 66126358 | |
| 1/M | | 66126356 | |
| J/P | | 66126316 | |
| K | | 66126357 | |
| N | | 66126367 | |
| **IR-Sender/** IR transmitter/ **Emetteur IR/** | | | |
| Trasmettitore (R | | | |
| A/B/C/D/E/F/1/JVM/N/O/P | ST1 | S6S21811 | |
| D/G/H/1/K/L/M | ST2 | 56521630 | |
| **Bitterle-Oeckel** / Battery **cover /** | | | |
| Couverds de batterie / Coperohio della batleria | | | |
| A/B/C | SALO | 84430514 | |
| D/F/I/M | OCEANIC | 84430794 | |
| E/G/HW/L/N/O/P | NOKIA | 8443 04 74 | |
| **ZF-Modul/** IF module/ **Module IF/ Modulo MF** | | | |
| D/F/1/J/M/N/P | ULTINORM | 5825 40 82 | |
| **H«Her\ZF-Modul** / HolderMF-Module / | | | |
| SupporfiFI.Module / SostegnoVModulo **MF** | | | |
| D/F/l/J/M/N/P | | 844811 50 | |
| Modul/Module MIDI SAT | | | |
| N | | 58564017 | |

## Chassis / Chassis/ Basamento

STEREO PLUS

| | | |
|---|---|---|
| - BG 110° | A | 5864 43 01 |
| -BGN110° | B | 5864 43 03 |
| - BG 90° | C | 5864 43 02 |
| - I N 110° | D | 5864 43 05 |
| - BG N 90" | E | 5864 43 04 |
| - 190" | F | 5864 43 06 |
| - MULTI 90° | G | 5864 43 10 |
| - 110''SAT N | H | 586443 12 |
| - BG 110° SQ | I | 5864 43 21 |
| - BGN110° SO | J | 5864 43 22 |
| -MULTI 110° | K | 5864 43 07 |
| -MULTI HO- | L | 5864 43 25 |

| | |
|---|---|
| )400 MOS | 377S 12 73 |
| C12 MOS | 37430004 |
| 8 L 08 ACP | 3746 00 02 |
| DA 2822 M | 3763 1248 |
| TOA2615 | 3763 1251 |
| aon spring/ | 736B7017 |
| di trazione | |
| 1366 - N 1 F | 3765 14 44 |
| 8366 N2 D | 3785 00 26 |
| TOA 4662 | 3765 1369 |
| TDA 4665 | 3741 00 08 |
| TDA 4661 | 3765 1381 |
| R 02 MOS | 378500 10 |
| OKOPPLER | 36841033 |
| R 01 MOS | 3779 1901 |
| ROGR MOS | 3778 10 02 |
| ROGR MOS | 3778 10 00 |
| ROGR MOS | 3778 1001 |
| R01 MOS | 3779 19 10 |

| | | |
|---|---|---|
| NF80 | ST 24 W 04 CP 1 MOS | 3786 00 07 |
| NF«0 | MC33164P-5RE | 3741 00 05 |
| NH 01/02/03 | | |
| A/B/C/D/F/G/M/K/L | TDA 6101 Q MOS | 3766 11 **92** |
| NH01 | | |
| E | TEA 5101 A | 37861190 |
| ML 01 | | |
| A/B/C/D/E/F/1/J | TDA 2545 A | 3743 00 06 |
| NO 10 | TEA 2164 G | 37661170 |
| NO 45 | L 78 M 06 CV | 3746 00 03 |
| N050 | | |
| A/B/C/D/E/F/G/1/JfK/L | L7812CV | 37681759 |
| | Spanntadar/ Tension spring/ | 7368 70 12 |
| | Reason de tenson/ Molla di trazione | |
| NO 51 | | |
| H | LM317T | 37661815 |
| | **liollertoir/** Insulating film/ | 8253 17 01 |
| | Feuille isolante/ Foglio isolante | |
| | Spannfadar/ Tenson spring/ | 7368 70 12 |
| | Resaort de tansK>n/ Molta di traJbone | |
| N060 | | |
| A/B/C/D/E/F/G/VJWL | **L7805ACV** | **37661785** |
| | **Spennfedef/** Tenson spring/ | **7368 70 12** |
| | **Resson de** tension/ Molla di trazion* | |
| N061 | | |
| H | LM317T | 37661815 |
| | UallTtolle/Insulating film/ | 8253 17 01 |
| | Feuille isolante/ Foglio isolanie | |
| | Spannteder/ Tenswn spring/ | 7368 70 12 |
| | RiMit da tension/ Molla di traziona | |
| N080 | TEA 5170 | **37661173** |
| NP01 | | |
| G/L | TDA 8395 | 3765 14 **45** |
| NR10 | | |
| A/B/C/0/E/F/VJ | CF 70200 | 3765 00 11 |
| NR30 | | |
| A/B/C/D/E/F/1/J | **CP 72306 MOS** | **37791571** |
| NS 10 | TDA 8350 Q | **37631427** |
| | **Spanntedar/** Tension spring/ | **7368 70 12** |
| | **Ressort de** tension/ Molla di trazione | |
| NW10 | | |
| H | L 7805 ACV | 3768 17 85 |
| | SpanmMar/Tensren spring/ | 73687012 |
| | Resson de tension/ Molla di traziona | |
| NW1S | | |
| H | LM317T | 37681615 |
| | **Isollerlolla/** Insulating film/ | 8253 17 01 |
| | Feuille isolante/ Foglio iwlante | |
| | Spanntedar/ Tension spring/ | **7368** 70 12 |
| | Ressort de tension/ Molla di traziona | |
| MW30 | | |
| H | **L7B12CV** | **37661759** |
| | **Spannfedar/** Tension spring/ | **7366 70 12** |
| | Ressort de tension/ Molla di traziona | |
| VOM., | | |
| L | TDA **4665** | 3741 00 06 |
| Transistor/ Trinsistron | | |
| VA 80/81 | BC *SSS B* Chip | 36145422 |
| VA82 | 8C 848 B Chip | 3614 5322 |
| VD42 | BC 848 B Chip | 3614 5322 |
| VD51 | BC 85B B Chip | 3614 54 22 |
| VD 52/61 | | |
| A/B/C/D/E/F/G/H/JWL | BC848C Chip | 36145323 |
| VD62 | | |
| A/B/C/D/E/F/G/H/K/L | BC 858 B Chip | 3614 54 22 |
| VE06 | BC 848 B Chip | 3614 53 22 |
| VE07 | BC 85S B Chip | 3614 54 22 |
| VE 13 | BC 848 C Chip | 3614 53 23 |
| VE 14 | BC 858 B Chip | 36145422 |
| VE 24/61 | BC 848 B Chip | 36145322 |
| VK 11/16 | BC 858 B Chip | 361454 22 |
| VK22 | BC 337 - 25 | 3614 71 38 |
| VK30 | | |
| G/H/K/L | BC 8*8 B Chip | 3614 53 22 |
| VK50 | S2000AF | 3616 1384 |
| | Spannfadar/ Tension spring/ | 7368 70 12 |
| | Ressort de lension/ Molla di trazione | |
| VK80 | BC 848 B Chip | 3614-M^2 |
| VL 11 | | |
| A/B/C/D/E/F/1/J | BC 848 B Chip | 36145322 |
| VL 17 | | |
| C/D/E/F/G/M/1/J.'K/T. | BC846B Chip | 36145322 |
| VL18 | | |
| G/H/K/L | BC648B Chip | 36145322 |
| V025 | BUF 405 AX 1 | 361621 32 |
| | Spannfadar/ Tension spnna/ | 7368 70 12 |
| | Rassorl da tension/ Molla di trazione | |
| V071 | BC 858 B Chip | 36145422 |
| V090 | | |
| H | BC848B Chip | 36145322 |
| VS51 | | |
| A/B/C/D/E/F/H/1/J | BC848B Chip | 36145322 |
| VW 20/21 | | |
| H | BC848B Chip | 36145322 |
| VW24 | | |
| H | BC858B Chip | 36145422 |
| Diode / Dkxjo | | |
| VD21 | 82XC5V1 | 36532218 |
| V081 | ZPD18 | 3653 1731 |
| VD 82/87/86 | LL4148F MIN | 355603 11 |

| | | | |
|---|---|---|---|
| **VE05** | BZX 84 C 5 V 1 | 36532218 | |
| **VE** 08/12/15/51 | LI-4146 F MIN | 3656 03 1 1 | |
| VE 10 | | | |
| A/B/C/D/E/F/G/H/1/Jrt. | LED TLPX 5600 AS 1 2 Z | 3691 00 02 | |
| K | TLXR4000GT 1 2 RT | 3691 00 01 | |
| **VE11** | BZXC 5 V 1 | 3653 22 18 | |
| **VE16** | ZPD 7,5 | 3653 1 7 3 7 | |
| **VE60** | | | |
| A/B/C/D/E/F/K | TLR 224 TPK 1 | 3681 1 4 4 5 | |
| G/H/I/J/L | TLPR -XXX | 3691 00 02 | |
| **VF 18/19/20** | 1 N4148 | 3656 08 1 0 | |
| **VF90** | LL4148F MIN | 3656 03 11 | |
| **VM2S** | | | |
| **E** | LL4148F MIN | 3656 03 11 | |
| **VH35** | | | |
| **E** | LL4148F MIN | 3656 03 11 | |
| **VH 45** | | | |
| **E** | LL4148F MIN | 3656 03 11 | |
| **VH** 60/67 | | | |
| A/B/C/D/F/G/H/I/J.K/L | LL4148F MIN | 3656 03 11 | |
| **VK 10** | LL4148F MIN | 3656 03 1 1 | |
| **VK23** | BA 158 | 36561010 | |
| **VKS1** | BY 228 | 3657 55 43 | |
| **VK53** | LL4148F MIN | 3656031 1 | |
| **VK87** | BA 158 | 3656 1 0 1 0 | |
| **VK61** | BYW74 | 365754 1 8 | |
| **VK63** | ZPY39 | 3653 24 23 | |
| **VK 67/73** | BA158 | 3656 1 0 1 0 | |
| **VK70** | | | |
| **L** | LL4148P MIN | 3656 03 1 1 | |
| **VK71** | BYW32 | 365754 1 3 | |
| **VK 74** | | | |
| E/F/G/H/1/J/K/L | BA158 | 3656 10 10 | |
| **VL18** | | | |
| **E** | LL4148F MIN | 3656 03 1 1 | |
| **V001** | TRIAC BT 137-600 | 3647 1 1 03 | |
| VO 02/03/04/05 | 1 N 4002 | 3657 1 1 36 | |
| VO 06,W08,09 | 1 N 4007 | 3657 11 41 | |
| VO 13/14/26 | BA 158 | 3656 1 0 1 0 | |
| VO 15/20/21 | LL4148F MIN | 3656031 1 | |
| V024 | BZX 85 C 3 V 0 | 3653 22 04 | |
| V041 | | | |
| A/B/C/D/E | BYT56J | 3657 53 90 | |
| F/G/H/I/J<K/L | BYT56J | 3624 00 01 | |
| **V042** | ZPD 33 | 3653 1 7 3 9 | |
| VO 50/60 | BYW32 | 365754 1 3 | |
| VO 51/61 | | | |
| H | BYV28/100 | 3657 54 50 | |
| **V067** | BYV28-100 | 3657 54 50 | |
| **VO 73/86** | | | |
| E/F/G/H/1/J/K/L | LL4148F MIN | 3656 03 11 | |
| **V093** | | | |
| **H** | LL4148F MIN | 3656 03 11 | |
| **VO 98** | | | |
| F/H/1/J/K/L | ZMM 5.1 | 3653 1 6 3 0 | |
| **VS02** | 1 N 4002 | 3657 1 1 36 | |
| **VS31** | ZPD 20 | 3653 1 7 3 2 | |
| **VS32** | LL4148F MIN | 3656 03 1 1 | |

**Kond«n«»tor/** Capacitor/ Condensaleur/ Condensatore

| | | | |
|---|---|---|---|
| **CA86** | 4700uF 35V | 3455 00 04 | |
| **CH01** | 10nF 1250V | 3315 C9 67 | |
| **CH12** | | | |
| F/K/L | 22nF 400V | 33150965 | A |
| **CK51** | | | |
| A/B/O/H | 8.2nF 2000V | 3385 08 38 | A |
| C/E/F | 6.8nF 1600V | 33650987 | A |
| G | 6.8nF 1.6kV | 3345 CO 08 | A |
| 1/K/L | 8.7nF 1600V | 3346 00 02 | A |
| **CK52** | | | |
| A/B/D/H | 1.3nF 1600V | 3345 00 05 | |
| C/E/F/G/1/K/L | 1.5nF 1600V | 3345 00 02 | |
| **CK54** | 0,18uF400V | 3324 08 29 | A |
| **CK55** | | | |
| A/B/D/H | 0.12uF 400V | 33241028 | A |
| C/E/F/G | 0.18yF400V | 3324 08 29 | A |
| 1/K/L | 0.22uF 400V | 3324 10 49 | A |
| **CK57** | 2.2uF160V | 342608 1 2 | |
| **CK61** | | | |
| A/B/D/H/1/K/L | 27nF 400V | 33240835 | A |
| C/6F/G | 47nF 400V | 3324 10 40 | A |
| **CK72** | 1000pF 35V | 3422 05 54 | |
| **CK74** | | | |
| A/B/C/D/E | 22uF 250V | 3426 05 21 | |
| **CO 01** | 0.33uF 275V | 3345 00 04 | |
| **CO 02** | 0.1UF400V | 3314 09 73 | A |
| **CO 03/04** | 0.33pF 250V | 3324 08 10 | A |
| **CO 06/08** | 1,5nF2KV | 3267 09 76 | A |
| **CO 09** | | | |
| A/B/D/H/I/K/L | 220pF 385V | 3426 09 72 | |
| C/E | 150uF385V | 3426 08 27 | |
| F/G | 150uF 385V | 3426 09 71 | |
| **CO** 25/26/40 | 330pF 1KV | 3267 08 53 | A |
| **CO** 26/27 | 680pF 2KV | 32670977 | A |
| **CO 30** | 2.2nF 4KV | 3261 09 32 | A |
| **CO 42** | 10uF 160V | 3426 08 07 | |
| **CO 88** | lOOOuF 35V | 3422 05 54 | |

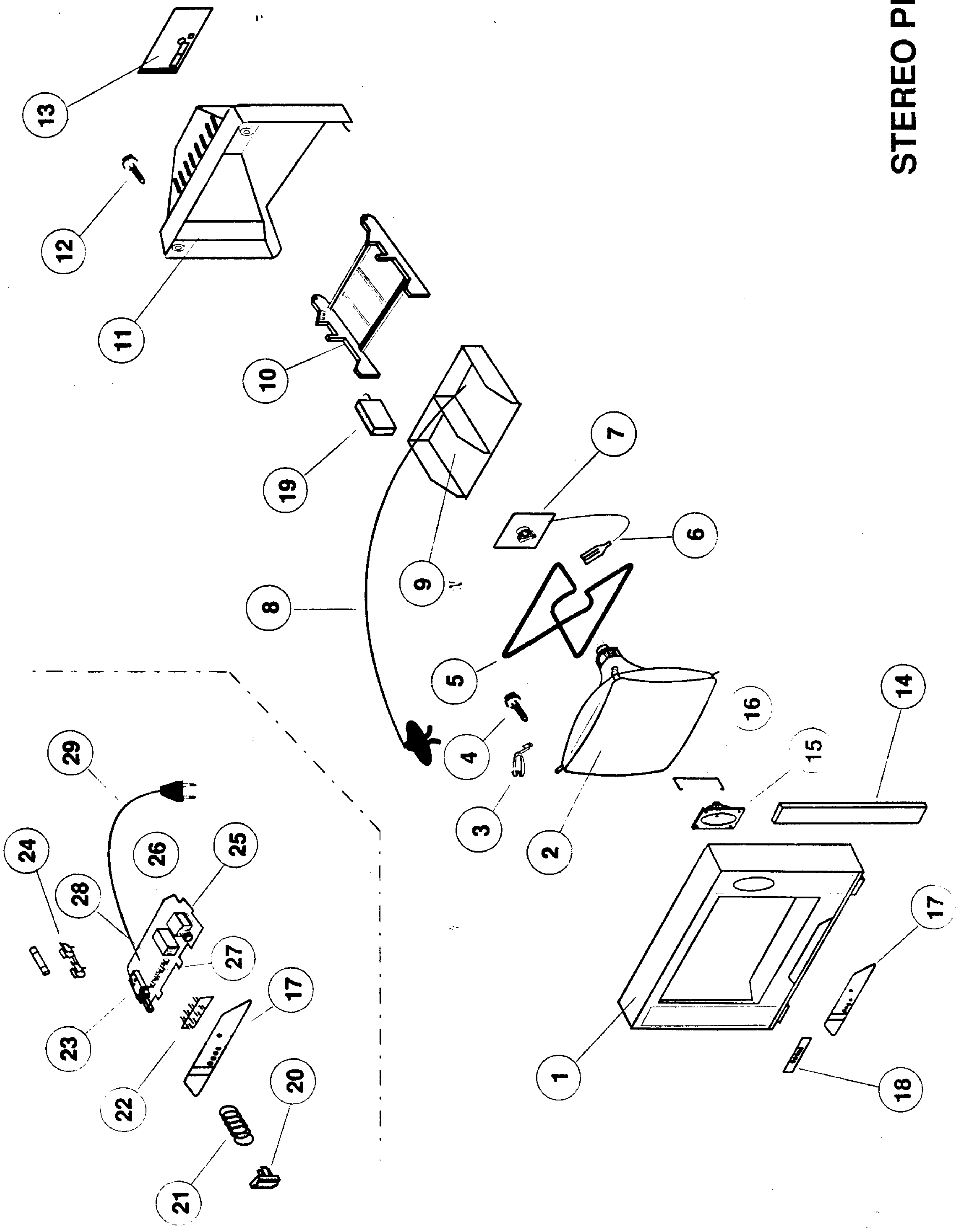
**WIderstand/** Resistance/ Resistance/ Resistenza

| | | | |
|---|---|---|---|
| RH03 | 1 K00.25W | 31596048 | A |
| A/B/C/D | | | |
| RH09 | 100U0.25W | 3151 45 16 | |
| RH 22/32/42 | 100K(10.4W | 31421248 | |
| RK55 | 1KnO,25W | 3151 45 19 | |
| RK56 | 2,2(1 0.25W | 3151451 1 | |
| RK60 | **Fokus/** Focus/ Focalisalion/ Focale | 37222010 | |
| RK62 | 15i2 0.5W | 31820001 | |
| RK 68/73 | 10C10.25W | 3151 45 13 | |
| RK72 | 100U0.25W | 3151 45 16 | |
| R001 | 5.112 8W | 31340801 | |
| R002 | PTC | 3172 12 40 | |
| R016 | 124KQ 1/8W SMD | 31426217 | |
| R021 | 0.33(i 2.5W | 31360001 | |
| R030 | 8.2MilO,54W | 31560970 | |
| RO 74 | IQOKflO.IW SMO | 31490004 | |
| RO 77 | 100KQ0.4W | 31421248 | |
| R093 | | | |
| H | 7500 0.1W | 31490002 | |
| RO 94/96 | | | |
| H | 240QO,1W | 31490006 | |
| R095 | | | |
| H | 2.1k(IO,1W | 31490008 | |
| RW 15 | | | |
| H | 2400 0.1W | 31490006 | |
| RW 16 | | | |
| H | 3,4kn0.1W | 31490010 | |
| Potentiometer | olenaometro | | |
| R080 | 4700 | 31230001 | |
| Quarz / Quartz | | | |
| ZA10 | 18.432MHZ | 4421 32 62 | |
| ZD15 | 4433618MHz | 4421 32 31 | |
| ZR41 | | | |
| A/B/C/D/E/F/H, | 13.875MHz | 44213261 | |
| Resonator/ Re | | | |
| ZE20 | 10MHz | 4576 00 01 | |
| ZF10 | 24MHz | 4571 00 01 | |
| Filler/ Filtre/ Fl | | | |
| ZL01 | | | |
| A/B/C/E/I | OFW G 3254 K | 4555 85 91 | |
| D/F | OFW J 3250 | 4555 85 68 | |
| ZL 02/22 | | | |
| A/B/C/0/E/F/I | **250nH TOKO** | 4553 00 02 | |
| ZL11 | | | |
| A/B/C/E/I | | 4555 87 02 | |
| D/F | 6 MHz | 4555 87 03 | |
| Spule; Coil/ Bo | | | |
| LK55 | | | |
| A/B/0/H/I/K/L | | 45161205 | |
| C/E/F/G | | 45161206 | |
| LK61 | | | |
| A/B/D/H/I/K/L | | 45172607 | |
| C/E/F/G | | 45172608 | |
| Droszel/ Choki | | | |
| LA 01 | | 4557 21 01 | |
| LA 02 | | 4557 1 5 5 3 | |
| L»'03 | | 4557 20 78 | |
| LA 32 | | | |
| E/F/G/H/K/L | | 4557 21 01 | |
| LA70 | | 4557 1753 | |
| LA 75/76/77 | | 4557 1680 | |
| LI 01 | | 4557 25 01 | |
| LK65 | | 4557 09 31 | |
| LL 11 | | | |
| A/B/C/D/E/P | | 4557 1 6 7 4 | |
| LO 01 | | 4557 04 **55** | |
| LO 15 | | 4557 1 6 3 3 | |
| Ferritpcrle/ Fe | | | |
| LK 22,70 | | 4654 1 5 03 | |
| LO 25.-26/50/6 | | 4654 1 5 03 | |
| Transformato | | | |
| TK50 | Treiber/ Driver/ D'atlaque/ Ecdtatore | 4523 1 1 87 | |
| TK 60 | ZeHen-Transt. / Hor. line transf. / | | |
| | Transf. de lignes ,' Trasf. di uscita orizz. | | |
| A/B/D/H/I/K/L | M10.10 | 45150528 | A |
| C/E/F/G | M10-09 | 45150527 | A |
| TO 30 | **Regelubertrager/** Pulse transformer/ | 4523 11 10 | |
| | Transf. d'impulsion' Trast- impuisio | | |
| T040 | **Wandler** Repealing coil | | |
| A/B/D/H/I/K/L | | 4523 1 7 1 9 | |
| C/E/F/G | | 45231 7 1 2 | |
| Kabel' Cable | | | |
| Ablenkkabel | | **4888** 64 57 | A |
| Cavo di deviaz | | | |
| Hochspannun | | 48886245 | A |
| Cable de haul | | | |
| Buchse ' Sock | | | |
| Kopfhdrerbuc | SE03 | 4144 11 21 | |
| Douille pour ca | | | |
| SCART-Buchs | XD 01/02 | 41450292 | |
| Reglerle a dou | | | |
| Buchse •' Sock | XF 01 | 4145 22 46 | |
| Sonstiges' be | | | |
| Halter Holder | | 8448 08 40 | |
| - Hochspannu | | | |
| Cable de ha | | | |
| Bedienteil / 0 | STEREO PLUS | 5859 03 60 | |
| Bloc de comm | | | |
| Bildrdhrenfas | XH01 | 41554034 | |
| Oouille de lube | | | |

# Ersatzteile/ Replacement parts/ Pieces de rechange/ Parti di ricambio

A 34a3

STEREO PLUS


13
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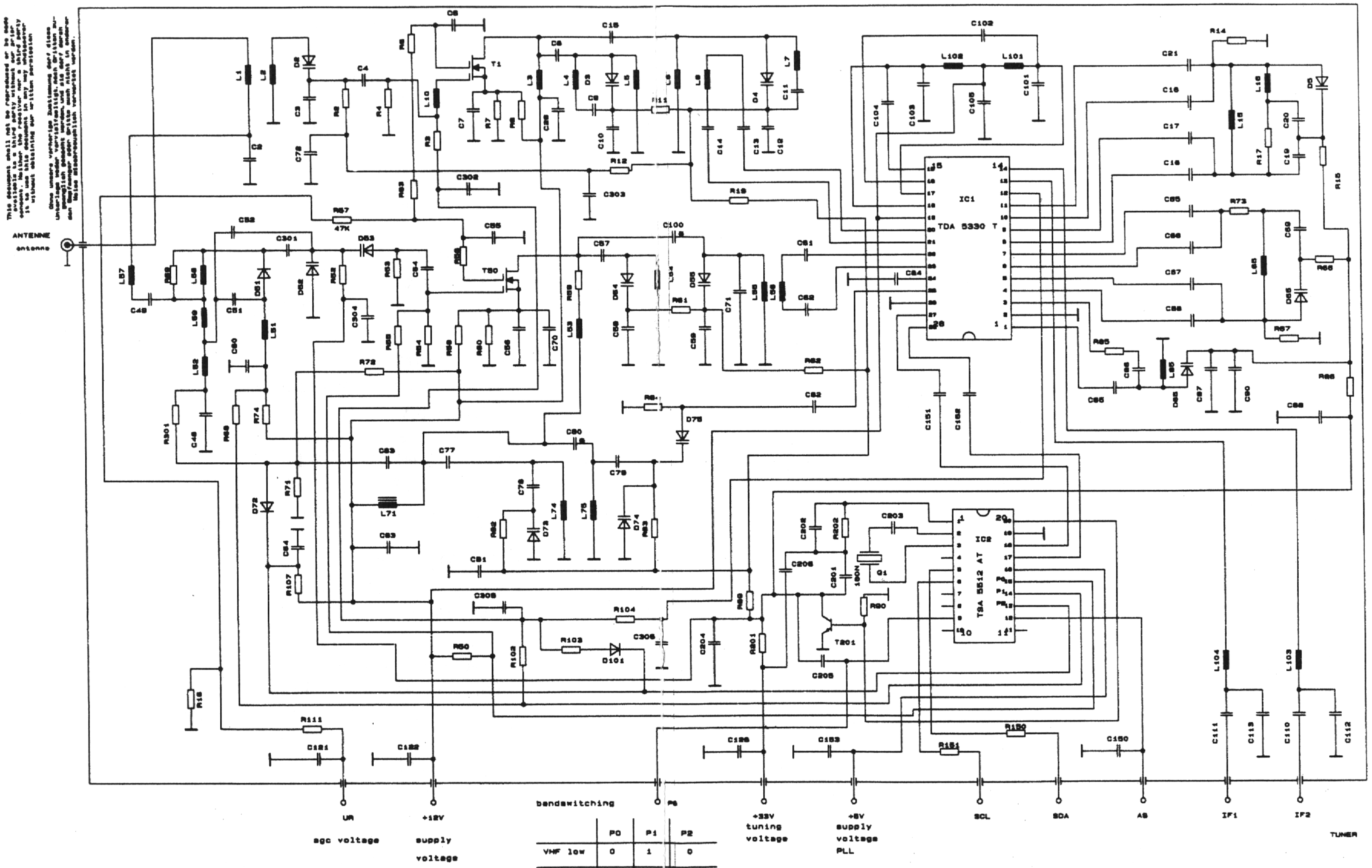

ANTENNE
antenne
IC1
TDA 5330 T
IC2
TSA 5512 AT
T1
T50
T201
Q1
UR
agc voltage
+12V
supply
voltage
P6
+33V
tuning
voltage
+5V
supply
voltage
PLL
SCL
SDA
AS
IF1
IF2
TUNER

bandswitching

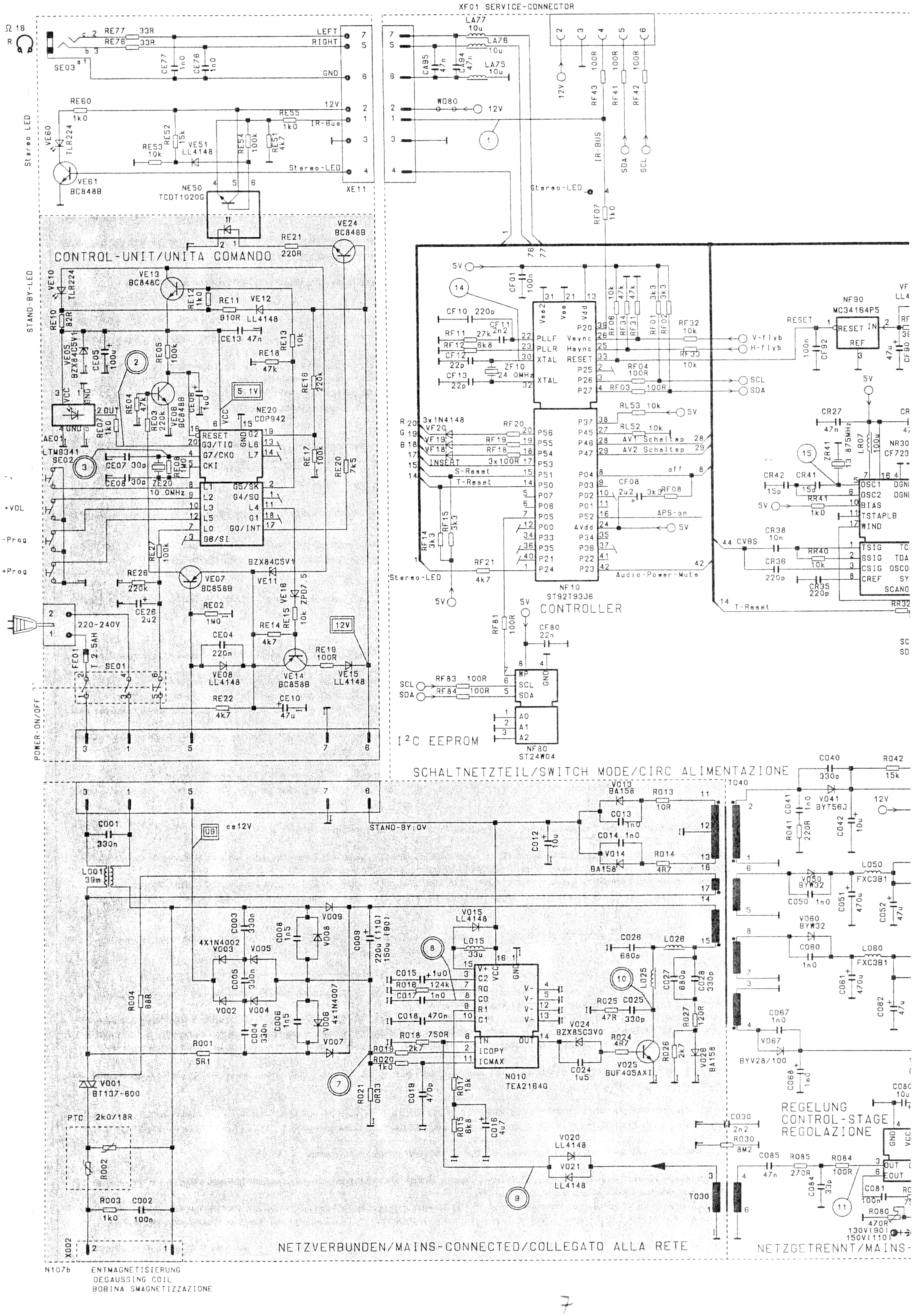
| | P0 | P1 | P2 |
|---|---|---|---|
| VHF low | 0 | 1 | 0 |
| VHF high | 0 | 0 | 1 |
| UHF | 1 | 0 | 0 |

**Nach Austausch des Moduls sind keine Abgleicharbeiten erforderlich.**

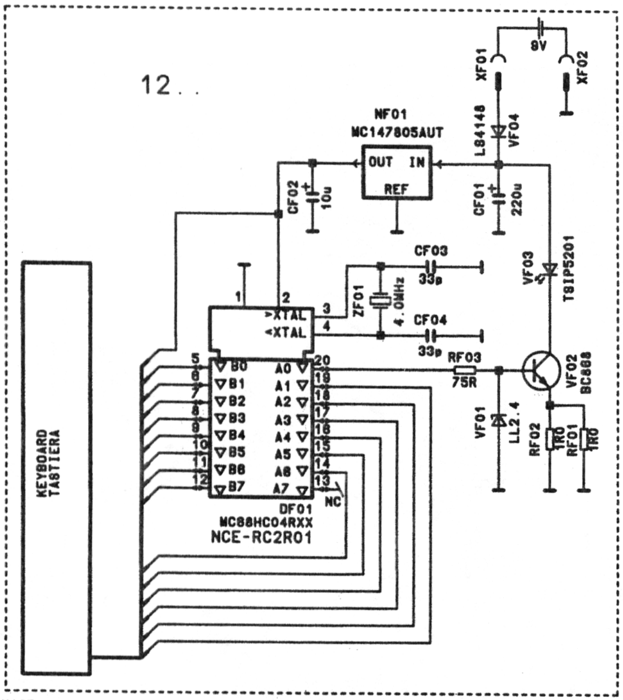
**Replacing a defective module does not necessitate realignment.**

**Aucun ajustage n'est necessaire en cas remplacement du module.**

**Nel caso di sostituzione del moduli non è necessaria nessuna taratura.**

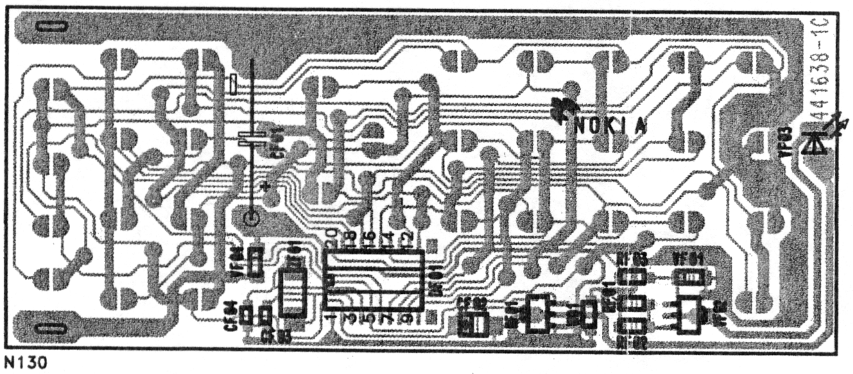

XF01 SERVICE-CONNECTOR
CONTROL-UNIT/UNITA COMANDO
STAND-BY-LED
Stereo LED
POWER-ON/OFF
220-240V
NE50 TCDT1020G
NE20 COP942
5.1V
12V
AE01 LTM8341
VE13 BC848C
VE24 BC848B
VE07 BC858B
VE14 BC858B
VE61 BC848B
VE60 TLR224
VE10 TLR224
XE11
SE03
SE01
FE01 T 2.5AH
+VOL
-Prog
+Prog
NF10 ST92T93J6
CONTROLLER
I²C EEPROM
NF80 ST24W04
NF90 MC34164P5
RESET
ZF10 24.0MHz
ZE20 10.0MHz
V-flyb
H-flyb
SCL
SDA
IR-BUS
Stereo-LED
Audio-Power-Mute
AV1 Schaltsp
AV2 Schaltsp
APS-on
S-Reset
T-Reset
INSERT
CVBS
SCHALTNETZTEIL/SWITCH MODE/CIRC ALIMENTAZIONE
STAND-BY:0V
ca12V
N010 TEA2164G
V025 BUF405AXI
V001 BT137-600
PTC 2k0/18R
L001 39m
4X1N4002
4x1N4007
T040
T030
REGELUNG
CONTROL-STAGE
REGOLAZIONE
130V(90)
150V(110)
NETZVERBUNDEN/MAINS-CONNECTED/COLLEGATO ALLA RETE
NETZGETRENNT/MAINS-
X002
N107b
ENTMAGNETISIERUNG
DEGAUSSING COIL
BOBINA SMAGNETIZZAZIONE

## ST 1 5652 18 11



12. .
XF01
9V
XF02
LS4148
VF04
NF01
MC147805AUT
OUT
IN
REF
CF02
10u
CF01
220u
VF03
TSIP5201
CF03
33p
ZF01
4.0MHz
CF04
33p
>XTAL
<XTAL
RF03
75R
VF02
BC868
VF01
LL2.4
RF02
1R0
RF01
1R0
KEYBOARD
TASTIERA
B0
B1
B2
B3
B4
B5
B6
B7
A0
A1
A2
A3
A4
A5
A6
A7
NC
DF01
MC68HC04RXX
NCE-RC2R01

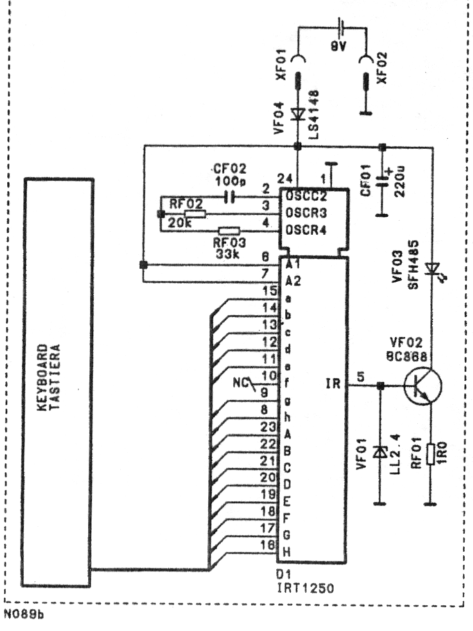
N087a



441638-1C
NOKIA
VF03
CF01
DF01
VF04
CF04
CF03
CF02
RF03
VF01
RF01
RF02
VF02

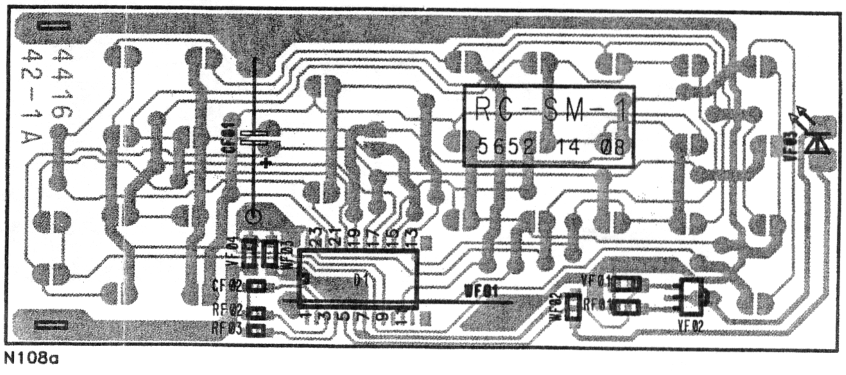
N130

## ST 2 5652 18 30



XF01
9V
XF02
VF04
LS4148
CF02
100p
RF02
20k
RF03
33k
OSCC2
OSCR3
OSCR4
CF01
220u
VF03
SFH485
VF02
BC868
IR
VF01
LL2.4
RF01
1R0
A1
A2
NC
KEYBOARD
TASTIERA
D1
IRT1250

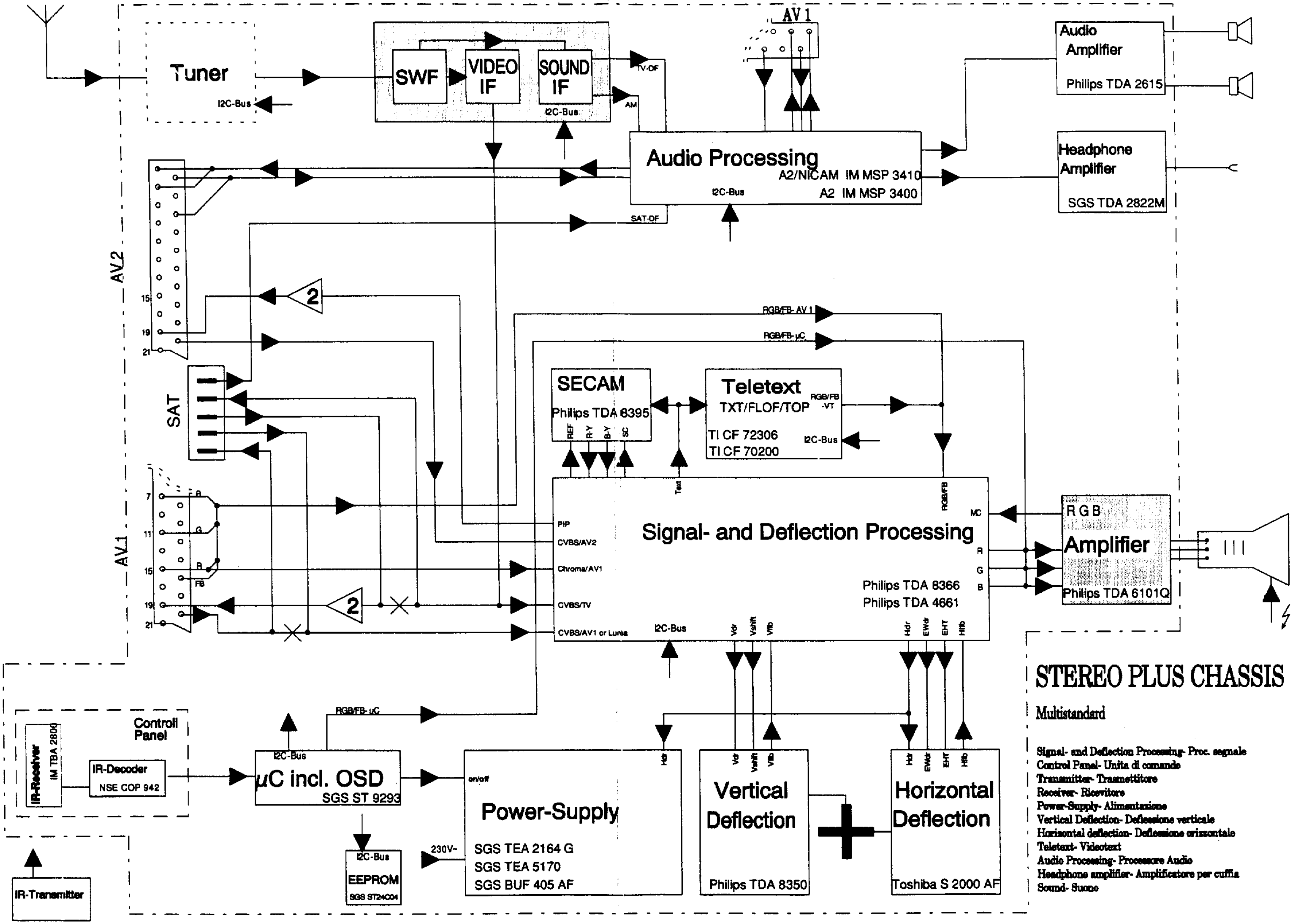
N089b



4416
42-1A
RC-SM-1
5652 14 08
CF01
VF03
VF04
CF02
RF02
RF03
D1
VF01
VF01
RF01
VF02

N108a

**A 34a2**


Tuner
I2C-Bus
SWF
VIDEO IF
SOUND IF
I2C-Bus
TV-DF
AM
AV 1
Audio Amplifier
Philips TDA 2615
Audio Processing
A2/NICAM IM MSP 3410
A2 IM MSP 3400
I2C-Bus
SAT-DF
Headphone Amplifier
SGS TDA 2822M
AV 2
15
19
21
2
RGB/FB- AV 1
RGB/FB- µC
SAT
SECAM
Philips TDA 8395
REF
R-Y
B-Y
SC
Teletext
TXT/FLOF/TOP
TI CF 72306
TI CF 70200
RGB/FB -VT
I2C-Bus
Text
RGB/FB
AV 1
7
11
15
19
21
B
G
R
FB
2
PIP
CVBS/AV2
Chroma/AV1
CVBS/TV
CVBS/AV1 or Luma
Signal- and Deflection Processing
Philips TDA 8366
Philips TDA 4661
I2C-Bus
Vdr
Vshift
Vfb
Hdr
EWdr
EHT
Hfb
MC
R
G
B
RGB
Amplifier
Philips TDA 6101Q
Controll Panel
IR-Receiver
IM TBA 2800
IR-Decoder
NSE COP 942
IR-Transmitter
I2C-Bus
µC incl. OSD
SGS ST 9293
RGB/FB- µC
I2C-Bus
EEPROM
SGS ST24C04
230V~
on/off
Power-Supply
SGS TEA 2164 G
SGS TEA 5170
SGS BUF 405 AF
Hdr
Vertical Deflection
Philips TDA 8350
Horizontal Deflection
Toshiba S 2000 AF

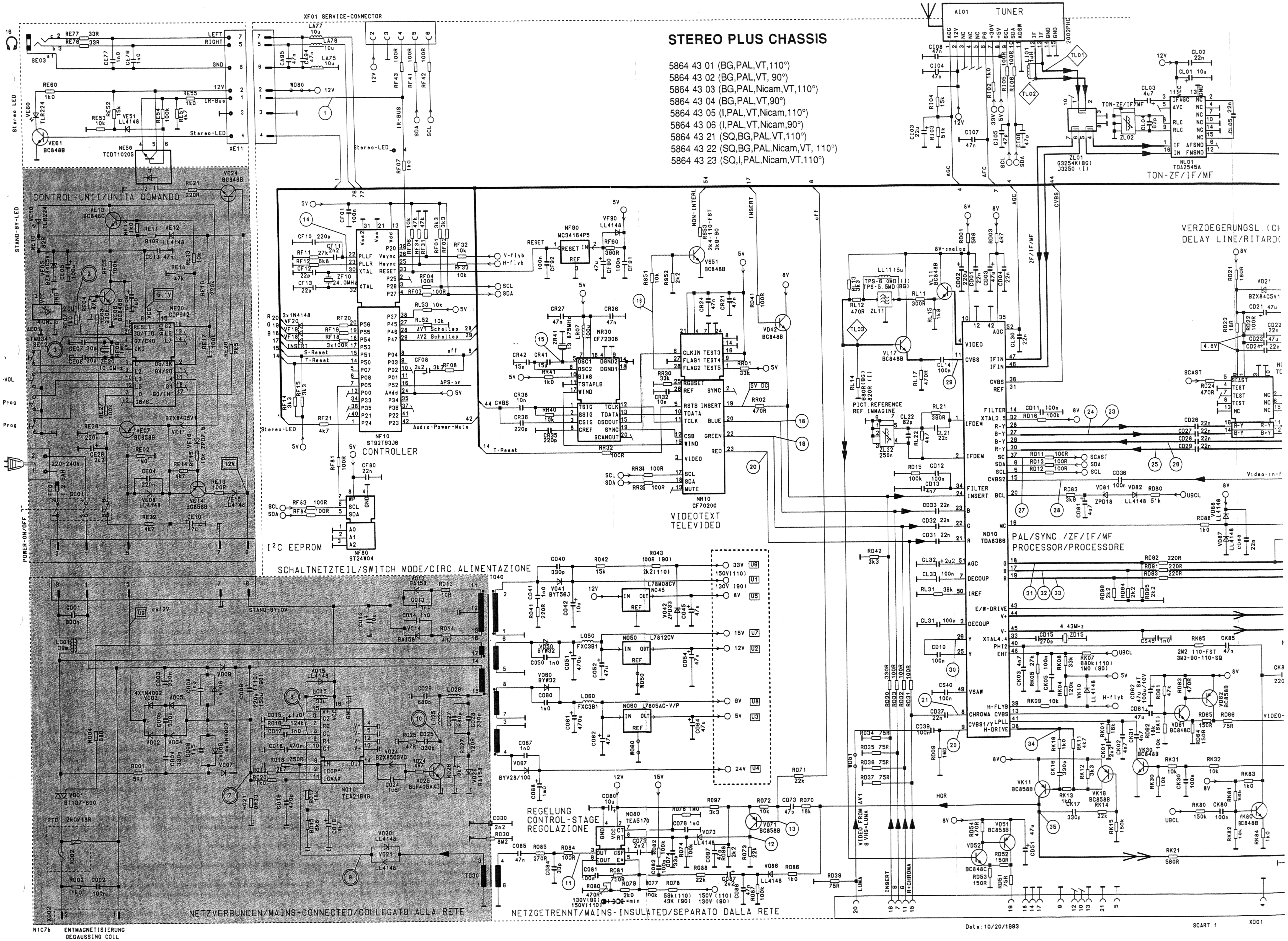
# STEREO PLUS CHASSIS

Multistandard

Signal- and Deflection Processing- Proc. segnale
Control Panel- Unita di comando
Transmitter- Trasmettitore
Receiver- Ricevitore
Power-Supply- Alimentazione
Vertical Deflection- Deflessione verticale
Horizontal deflection- Deflessione orizzontale
Teletext- Videotext
Audio Processing- Processore Audio
Headphone amplifier- Amplificatore per cuffia
Sound- Suono

# STEREO PLUS CHASSIS

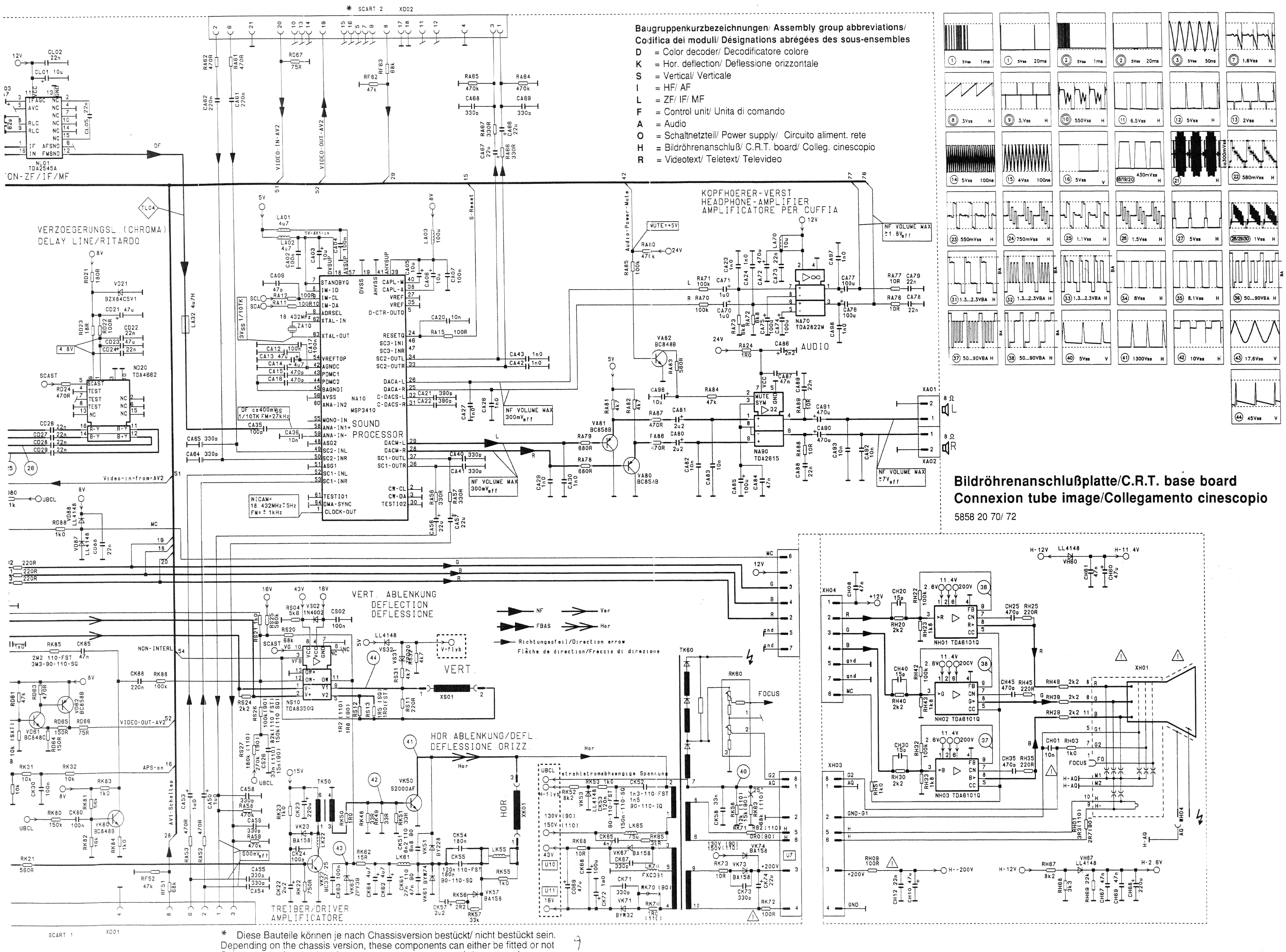
5864 43 01 (BG,PAL,VT,110°)
5864 43 02 (BG,PAL,VT, 90°)
5864 43 03 (BG,PAL,Nicam,VT,110°)
5864 43 04 (BG,PAL,VT,90°)
5864 43 05 (I,PAL,VT,Nicam,110°)
5864 43 06 (I,PAL,VT,Nicam,90°)
5864 43 21 (SQ,BG,PAL,VT,110°)
5864 43 22 (SQ,BG,PAL,Nicam,VT, 110°)
5864 43 23 (SQ,I,PAL,Nicam,VT,110°)



XF01 SERVICE-CONNECTOR
TUNER
A101
TON-ZF/IF/MF
VERZOEGERUNGSL.(C
DELAY LINE/RITARD(
CONTROL-UNIT/UNITA COMANDO
CONTROLLER
NF10 ST92T93J6
I²C EEPROM
NF80 ST24W04
VIDEOTEXT
TELEVIDEO
NR10 CF70200
PAL/SYNC./ZF/IF/MF
PROCESSOR/PROCESSORE
ND10 TDA8366
SCHALTNETZTEIL/SWITCH MODE/CIRC.ALIMENTAZIONE
REGELUNG
CONTROL-STAGE
REGOLAZIONE
NETZVERBUNDEN/MAINS-CONNECTED/COLLEGATO ALLA RETE
NETZGETRENNT/MAINS-INSULATED/SEPARATO DALLA RETE
N107b
ENTMAGNETISIERUNG
DEGAUSSING COIL
BOBINA SMAGNETIZZAZIONE
SCART 1
XD01
Date:10/20/1993
Stereo LED
STAND-BY-LED
POWER-ON/OFF
220-240V

7

8


* SCART 2 XD02
SCART 1 XD01
KOPFHOERER-VERST
HEADPHONE-AMPLIFIER
AMPLIFICATORE PER CUFFIA
AUDIO
NA70 TDA2822M
NA90 TDA2615
SOUND PROCESSOR
NA10 MSP3410
VERZOEGERUNGSL. (CHROMA)
DELAY LINE/RITARDO
ND20 TDA4662
NL01 TDA2545A
ON-ZF/IF/MF
VIDEO-IN-AV2
VIDEO-OUT-AV2
S-Reset
Audio-Power-Mute
MUTE=+5V
NF VOLUME MAX ≥1.8Veff
NF VOLUME MAX ≥7Veff
NF VOLUME MAX 300mVeff
NICAM= 18.432MHz±5Hz FM=±1kHz
DF ca400mVSS 1/10TK FM=27kHz
3VSS 1/10TK
Video-in-from-AV2
VERT. ABLENKUNG
DEFLECTION
DEFLESSIONE
NS10 TDA8350Q
VERT
XS01
NF
FBAS
Ver
Hor
Richtungspfeil/Direction arrow
Flèche de direction/Freccia di direzione
HOR ABLENKUNG/DEFL.
DEFLESSIONE ORIZZ.
HOR
XK01
VK50 S2000AF
TK50
TK60
FOCUS
RK60
strahlstromabhaengige Spannung
TREIBER/DRIVER
AMPLIFICATORE
NON-INTERL
APS-on
AV1-Schaltsp
XH04
XH03
XH01
NH01 TDA6101Q
NH02 TDA6101Q
NH03 TDA6101Q
H-12V
H-11.4V
H-2.6V
H--200V
①–㊹

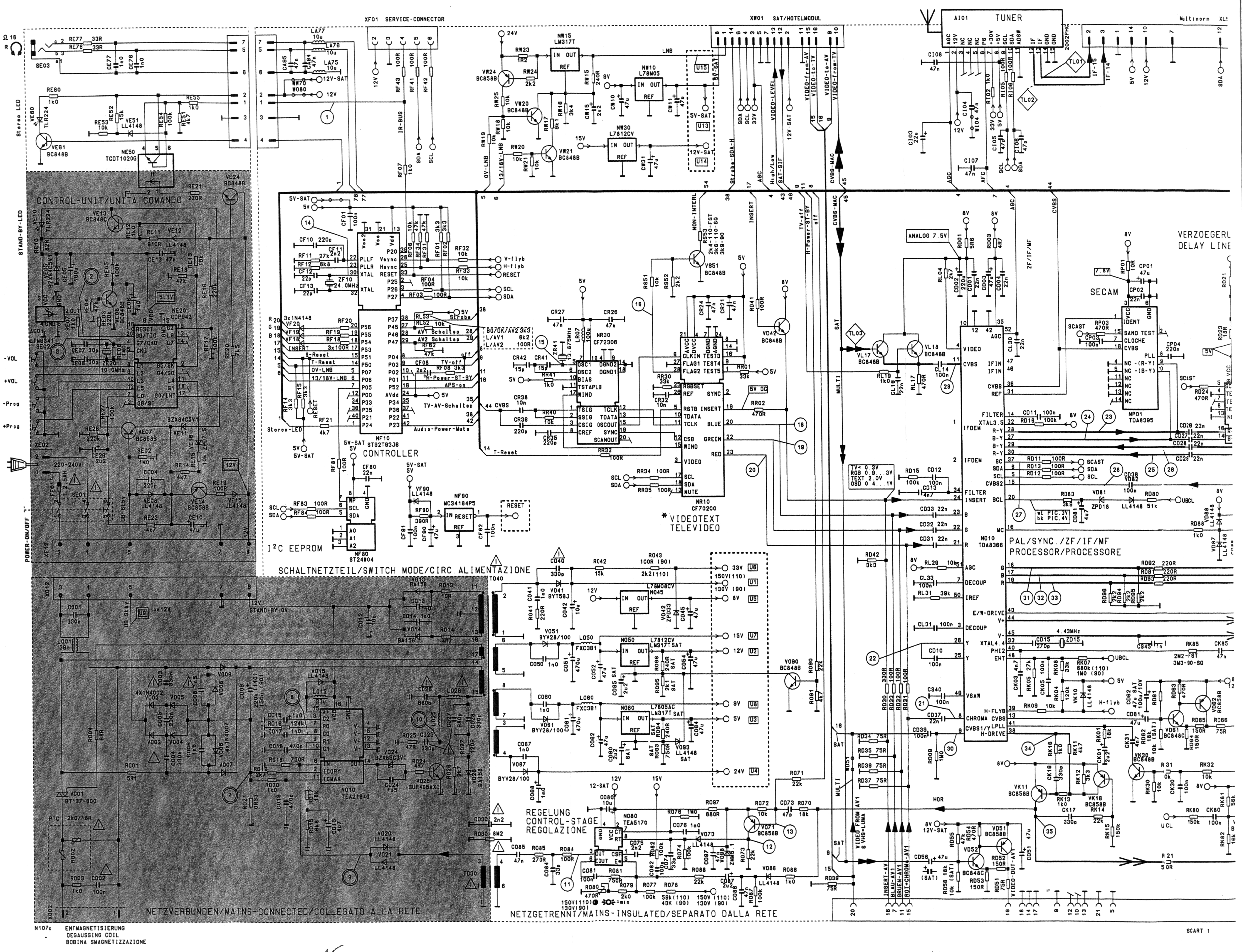
Baugruppenkurzbezeichnungen/ Assembly group abbreviations/
Codifica dei moduli/ Désignations abrégées des sous-ensembles

D = Color decoder/ Decodificatore colore
K = Hor. deflection/ Deflessione orizzontale
S = Vertical/ Verticale
I = HF/ AF
L = ZF/ IF/ MF
F = Control unit/ Unita di comando
A = Audio
O = Schaltnetzteil/ Power supply/ Circuito aliment. rete
H = Bildröhrenanschluß/ C.R.T. board/ Colleg. cinescopio
R = Videotext/ Teletext/ Televideo

## Bildröhrenanschlußplatte/C.R.T. base board
## Connexion tube image/Collegamento cinescopio

5858 20 70/ 72

* Diese Bauteile können je nach Chassisversion bestückt/ nicht bestückt sein.
Depending on the chassis version, these components can either be fitted or not
Suivant la version du chassis, ces composants sont montés/ pas montés.
La possibilità di montaggio di questi componenti dipende dalla versione dello chassis


XF01 SERVICE-CONNECTOR
XW01 SAT/HOTELMODUL
AI01 TUNER
Multinorm XL
CONTROL-UNIT/UNITA COMANDO
STAND-BY-LED
Stereo LED
POWER-ON/OFF
-VOL
+VOL
-Prog
+Prog
220-240V
NF10 ST92T93J8 CONTROLLER
I²C EEPROM
NF80 ST24W04
NF90 MC34164P5
RESET
NR10 CF70200
* VIDEOTEXT TELEVIDEO
NR30 CF72306
VERZOEGERL DELAY LINE
SECAM
NP01 TDA8395
ANALOG 7.5V
ZF/IF/MF
ND10 TDA8366
PAL/SYNC./ZF/IF/MF PROCESSOR/PROCESSORE
TV= 0.3V RGB 0.9...3V TEXT 2.0V OSD 0.4...1V
SCHALTNETZTEIL/SWITCH MODE/CIRC.ALIMENTAZIONE
NO10 TEA2164G
REGELUNG CONTROL-STAGE REGOLAZIONE
N080 TEA5170
NETZVERBUNDEN/MAINS-CONNECTED/COLLEGATO ALLA RETE
NETZGETRENNT/MAINS-INSULATED/SEPARATO DALLA RETE
N107c ENTMAGNETISIERUNG DEGAUSSING COIL BOBINA SMAGNETIZZAZIONE
SCART 1
VIDEO-from-AV
VIDEO-to-TV
VIDEO-to-AV
VIDEO-from-TV
CVBS-MAC
SAT
MULTI
INSERT-AV
BLAU-AV1
GRUEN-AV1
ROT+CHROMA-AV1
VIDEO FROM AV1 S VHS=LUMA
VIDEO-OUT-AV1
33V
150V(110) 130V (90)
8V
15V
12V
5V
24V

# STEREO PLUS CHASSIS

5864 43 07 (BG/DK,PS,VT,110°)
5864 43 08 (BG/DK,PS,VT,90°)
5864 43 09 (multi,110°)
5864 43 10 (multi,90°)
5864 43 11 (multi,VT,Nicam,Hotel,110°)
5864 43 12 (multi,VT,Nicam,Sat,110°)
5864 43 24 (SQ,BG/DK,PS,VT,110°)
5864 43 25 (SQ,multi,110°)
5864 43 26 (SQmulti,Nicam,VT,Hotel,110°)
5864 43 27 (SQ,multi,VT,Nicam,Sat,110°)

* Diese Bauteile können je nach Chassisversion bestückt/ nicht bestückt sein.
Depending on the chassis version, these components can either be fitted or not
Suivant la version du chassis, ccs composants sont montés/ pas montés.
La possibilità di montaggio di questi componenti dipende dalla versione dello chassis

Alle Decoderoszillogramme sind unter folgenden Bedingungen aufgenommen: Normfarbbalken PAL, max. Kontrast, ca. Nennhelligkeit u. nominale Sättigung.

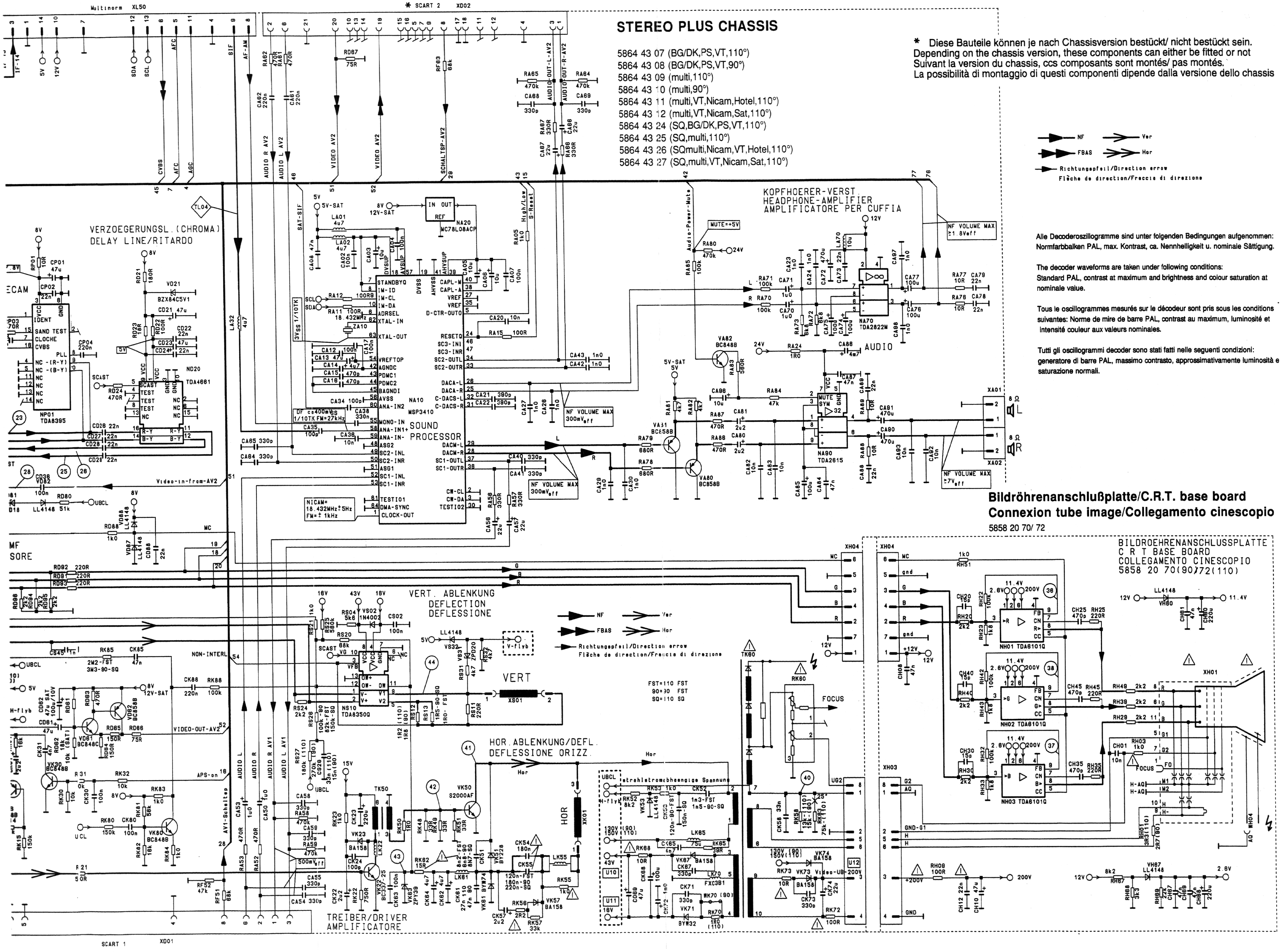
The decoder waveforms are taken under following conditions: Standard PAL, contrast at maximum and brightness and colour saturation at nominale value.

Tous le oscillogrammes mesurés sur le décodeur sont pris sous les conditions suivantes: Norme de mire de barre PAL, contrast au maximum, luminosité et intensité couleur aux valeurs nominales.

Tutti gli oscillogrammi decoder sono stati fatti nelle seguenti condizioni: generatore di barre PAL, massimo contrasto, approssimativamente luminosità e saturazione normali.

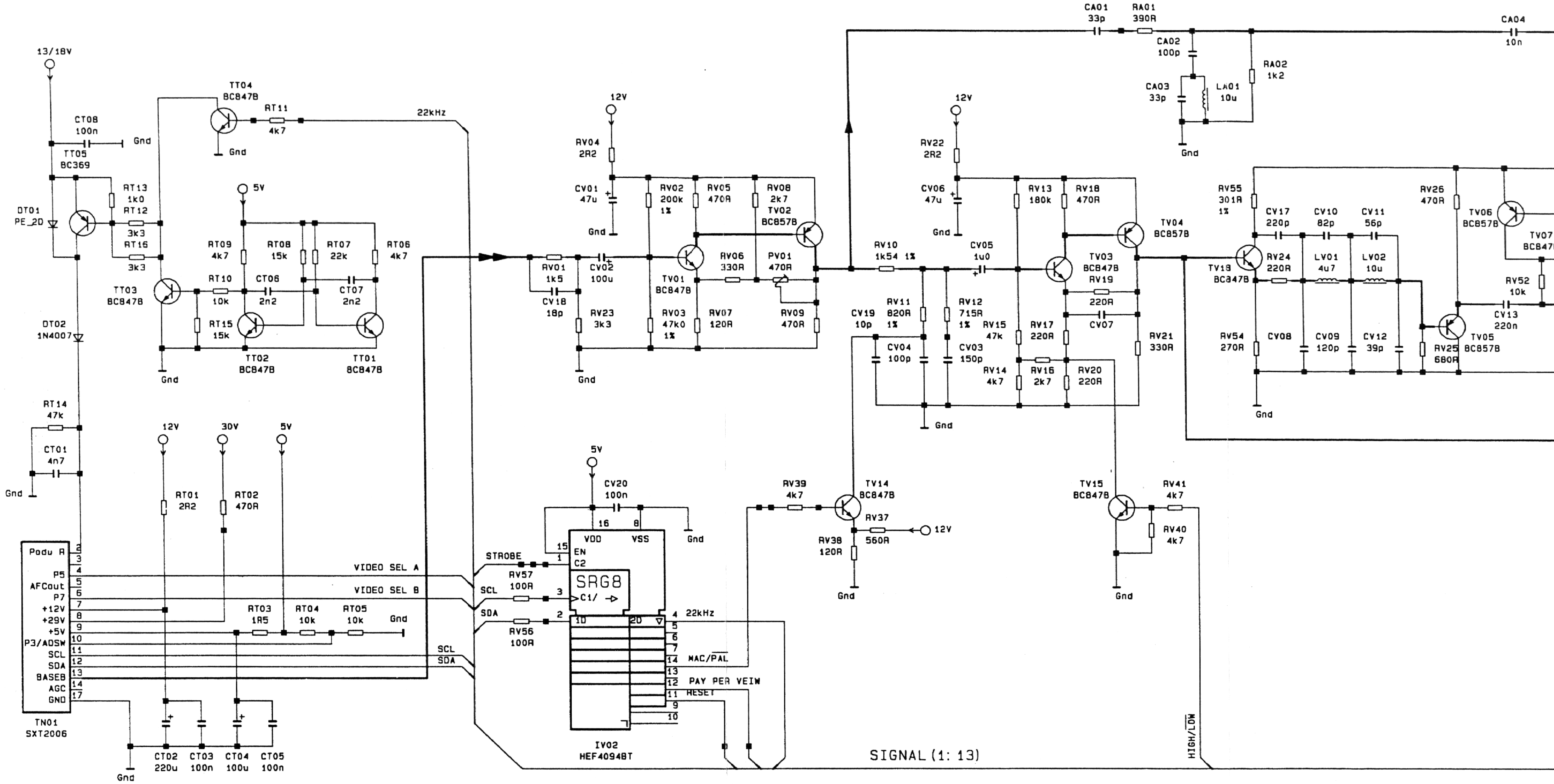
## Bildröhrenanschlußplatte/C.R.T. base board
## Connexion tube image/Collegamento cinescopio

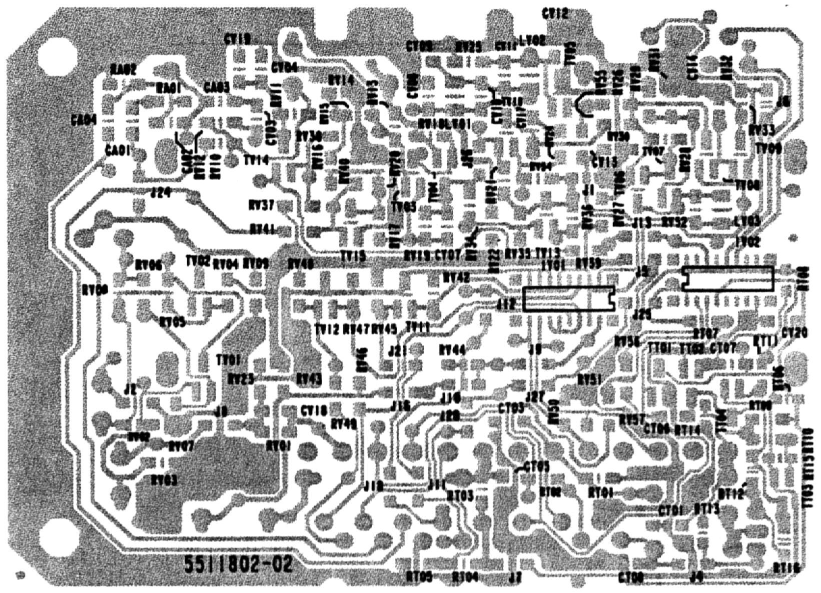
5858 20 70/ 72

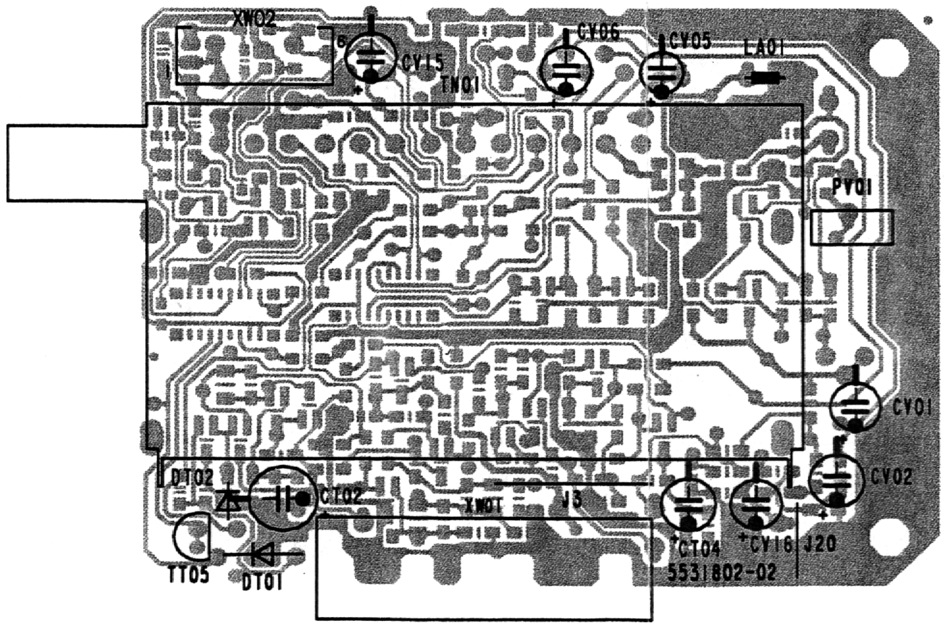


Multinorm XL50
* SCART 2 XD02
NF
FBAS
Ver
Hor
Richtungspfeil/Direction arrow
Flèche de direction/Freccia di direzione
KOPFHOERER-VERST.
HEADPHONE-AMPLIFIER
AMPLIFICATORE PER CUFFIA
AUDIO
NF VOLUME MAX ≥1.8Veff
NF VOLUME MAX 300mVeff
NF VOLUME MAX ≥7Veff
MUTE=+5V
NA70 TDA2822M
NA80 TDA2615
NA10 MSP3410
SOUND PROCESSOR
NA20 MC78L08ACP
VERZOEGERUNGSL.(CHROMA)
DELAY LINE/RITARDO
ND20 TDA4661
NP01 TDA8395
VERT. ABLENKUNG
DEFLECTION
DEFLESSIONE
NS10 TDA8350Q
VERT
HOR.ABLENKUNG/DEFL.
DEFLESSIONE ORIZZ.
HOR
TREIBER/DRIVER
AMPLIFICATORE
FOCUS
FST=110 FST
90=30 FST
SQ=110 SQ
BILDROEHRENANSCHLUSSPLATTE
C R T BASE BOARD
COLLEGAMENTO CINESCOPIO
5858 20 70(90)72(110)
NH01 TDA6101Q
NH02 TDA6101Q
NH03 TDA6101Q
XH01
XH03
XH04
SCART 1 XD01

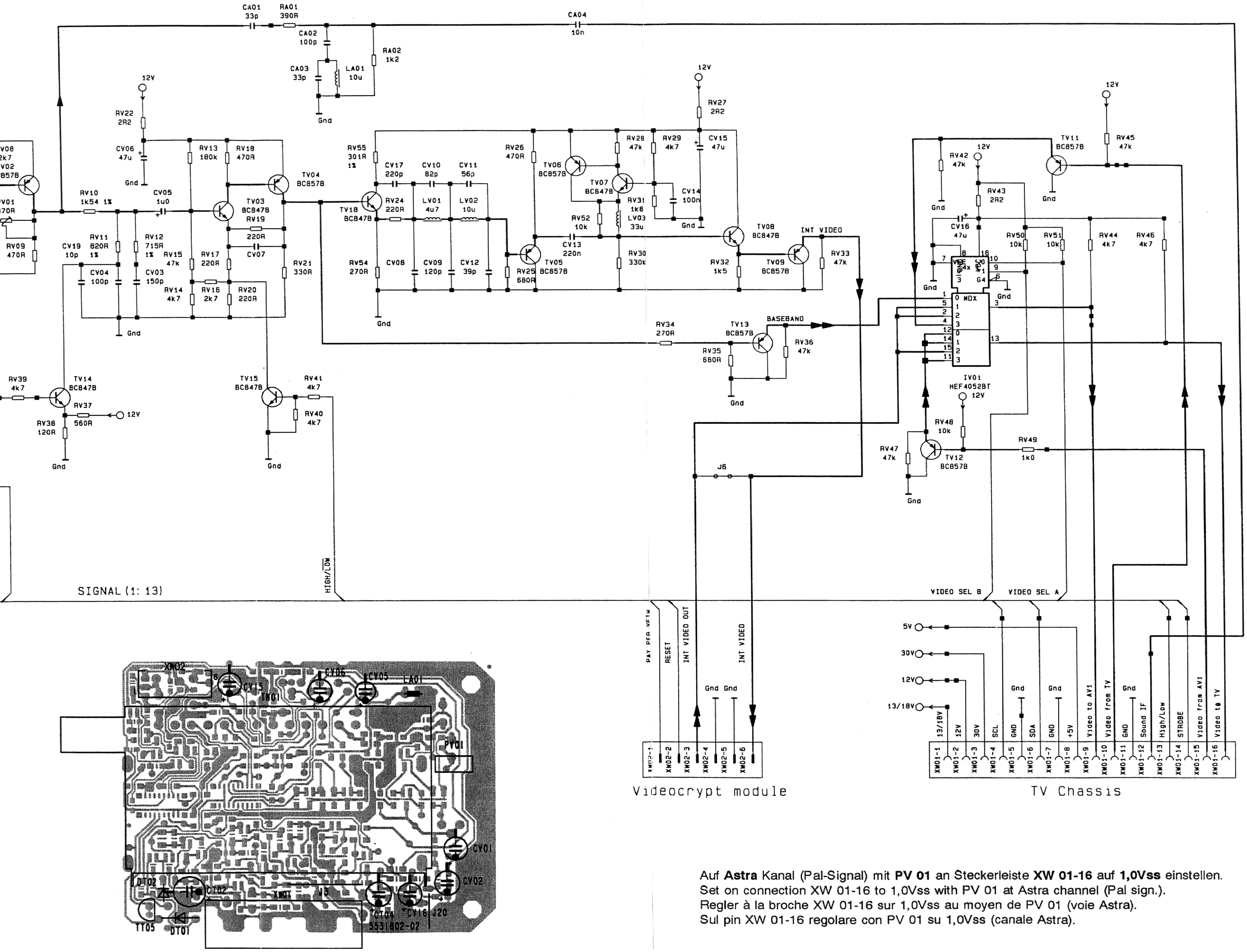
## SAT- Modul 5856 40 17


13/18V
CT08 100n
TT05 BC369
DT01 PE_20
RT13 1k0
RT12 3k3
RT16 3k3
TT03 BC847B
DT02 1N4007
RT14 47k
CT01 4n7
Gnd
TT04 BC847B
RT11 4k7
22kHz
5V
RT09 4k7
RT08 15k
RT07 22k
RT06 4k7
RT10 10k
CT06 2n2
CT07 2n2
RT15 15k
TT02 BC847B
TT01 BC847B
12V
30V
RT01 2R2
RT02 470R
RT03 1R5
RT04 10k
RT05 10k
Podu R
P5
AFCout
P7
+12V
+29V
+5V
P3/AOSW
SCL
SDA
BASEB
AGC
GND
TN01 SXT2006
VIDEO SEL A
VIDEO SEL B
CT02 220u
CT03 100n
CT04 100u
CT05 100n
RV04 2R2
CV01 47u
RV02 200k 1%
RV05 470R
RV08 2k7
TV02 BC857B
RV01 1k5
CV02 100u
CV18 18p
RV23 3k3
TV01 BC847B
RV06 330R
PV01 470R
RV03 47k0 1%
RV07 120R
RV09 470R
STROBE
RV57 100R
SCL
SDA
RV56 100R
CV20 100n
VDD
VSS
EN
C2
SRG8
C1/
1D
2D
IV02 HEF4094BT
MAC/PAL
PAY PER VEIW
RESET
RV22 2R2
CV06 47u
RV10 1k54 1%
RV11 820R 1%
RV12 715R 1%
CV05 1u0
CV19 10p
CV04 100p
CV03 150p
RV15 47k
RV14 4k7
RV13 180k
RV18 470R
RV17 220R
RV16 2k7
RV20 220R
TV03 BC847B
RV19 220R
CV07
TV04 BC857B
RV21 330R
RV39 4k7
TV14 BC847B
RV37 560R
RV38 120R
TV15 BC847B
RV41 4k7
RV40 4k7
SIGNAL (1: 13)
HIGH/LOW
CA01 33p
RA01 390R
CA02 100p
CA03 33p
LA01 10u
RA02 1k2
CA04 10n
RV55 301R 1%
CV17 220p
CV10 82p
CV11 56p
TV13 BC847B
RV24 220R
LV01 4u7
LV02 10u
RV54 270R
CV08
CV09 120p
CV12 39p
RV26 470R
TV06 BC857B
TV07 BC847
RV52 10k
CV13 220n
RV25 680R
TV05 BC857B




XW02
CV15
TN01
CV06
CV05
LA01
PV01
CV01
CV02
DT02
CT02
XW01
J3
CT04
CY16
J20
5531802-02
TT05
DT01

## SAT- Modul 5856 40 17

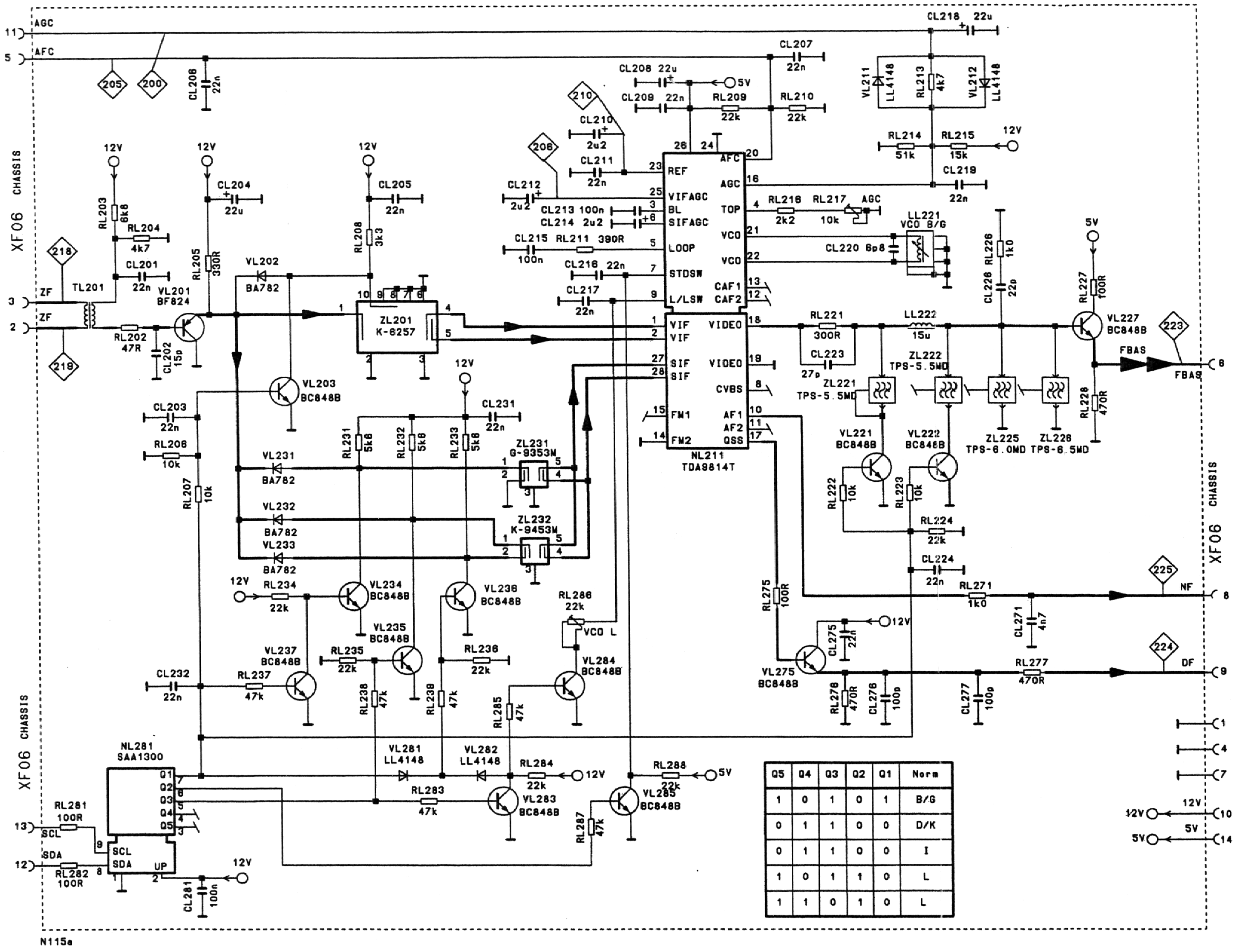


CA01 33p
RA01 390R
CA02 100p
CA03 33p
LA01 10u
RA02 1k2
CA04 10n
12V
Gnd
RV22 2R2
CV06 47u
RV10 1k54 1%
CV05 1u0
RV13 180k
RV18 470R
TV03 BC847B
TV04 BC857B
RV19 220R
CV07
RV11 820R 1%
RV12 715R 1%
RV15 47k
RV17 220R
RV21 330R
CV19 10p
CV04 100p
CV03 150p
RV14 4k7
RV16 2k7
RV20 220R
RV09 470R
RV39 4k7
TV14 BC847B
RV37 560R
RV38 120R
TV15 BC847B
RV41 4k7
RV40 4k7
RV55 301R 1%
CV17 220p
CV10 82p
CV11 56p
TV18 BC847B
RV24 220R
LV01 4u7
LV02 10u
RV54 270R
CV08
CV09 120p
CV12 39p
RV26 470R
TV06 BC857B
TV07 BC847B
RV28 47k
RV29 4k7
RV27 2R2
CV15 47u
CV14 100n
RV52 10k
RV31 1k8
LV03 33u
CV13 220n
TV05 BC857B
RV25 680R
RV30 330k
RV32 1k5
TV08 BC847B
TV09 BC857B
INT VIDEO
RV33 47k
RV34 270R
TV13 BC857B
BASEBAND
RV35 680R
RV36 47k
J6
TV11 BC857B
RV45 47k
RV42 47k
RV43 2R2
CV16 47u
RV50 10k
RV51 10k
RV44 4k7
RV46 4k7
MDX
IV01 HEF4052BT
RV48 10k
RV47 47k
TV12 BC857B
RV49 1k0
SIGNAL (1: 13)
HIGH/LOW
VIDEO SEL B
VIDEO SEL A
PAY PER VIEW
RESET
INT VIDEO OUT
INT VIDEO
XW02-1
XW02-2
XW02-3
XW02-4
XW02-5
XW02-6
Videocrypt module
5V
30V
12V
13/18V
SCL
SDA
GND
+5V
Video to AV1
Video from TV
Sound IF
High/Low
STROBE
Video from AV1
Video to TV
XW01-1
XW01-2
XW01-3
XW01-4
XW01-5
XW01-6
XW01-7
XW01-8
XW01-9
XW01-10
XW01-11
XW01-12
XW01-13
XW01-14
XW01-15
XW01-16
TV Chassis
XW02
CV15
TM01
CV06
CV05
LA01
PV01
CV01
CV02
DT02
CT02
XW01
J3
CT04
CV16
J20
5531802-02
TT05
DT01

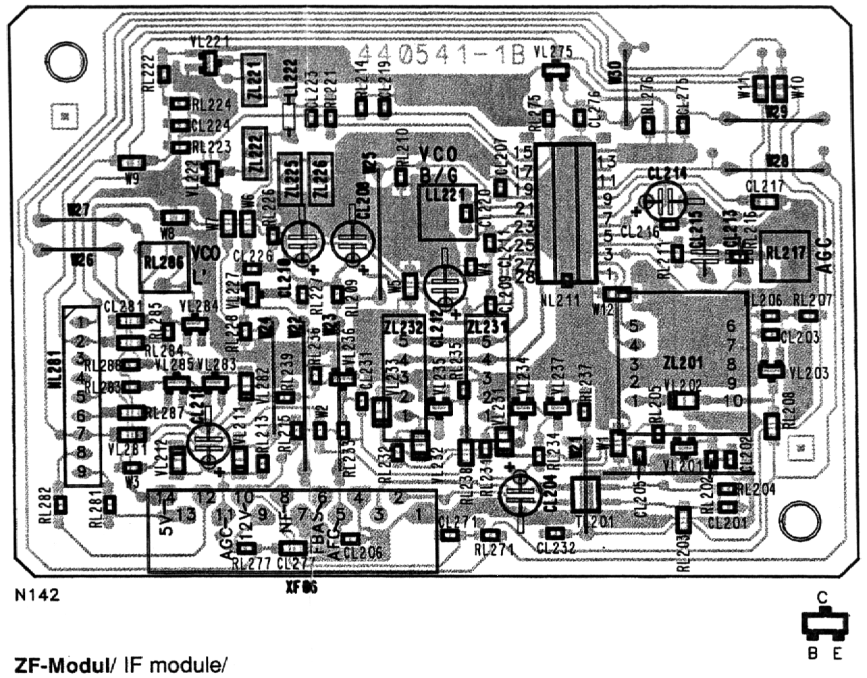
Auf **Astra** Kanal (Pal-Signal) mit **PV 01** an Steckerleiste **XW 01-16** auf **1,0Vss** einstellen.
Set on connection XW 01-16 to 1,0Vss with PV 01 at Astra channel (Pal sign.).
Regler à la broche XW 01-16 sur 1,0Vss au moyen de PV 01 (voie Astra).
Sul pin XW 01-16 regolare con PV 01 su 1,0Vss (canale Astra).

## Multinorm Modul

5825 40 82


AGC
AFC
ZF
XF06 CHASSIS
TL201
VL201 BF824
ZL201 K-6257
VL202 BA782
VL203 BC848B
NL211 TDA9814T
REF
VIFAGC
BL
SIFAGC
LOOP
STDSW
L/LSW
VIF
SIF
FM1
FM2
AFC
AGC
TOP
VCO
CAF1
CAF2
VIDEO
CVBS
AF1
AF2
QSS
LL221 VCO B/G
ZL221 TPS-5.5MD
ZL222 TPS-5.5MD
ZL225 TPS-6.0MD
ZL226 TPS-6.5MD
LL222 15u
VL227 BC848B
FBAS
NF
DF
VL275 BC848B
ZL231 G-9353M
ZL232 K-9453M
VL231 BA782
VL232 BA782
VL233 BA782
RL286 22k
VCO L
NL281 SAA1300
SCL
SDA
UP
12V
5V
N115a

| Q5 | Q4 | Q3 | Q2 | Q1 | Norm |
|---|---|---|---|---|---|
| 1 | 0 | 1 | 0 | 1 | B/G |
| 0 | 1 | 1 | 0 | 0 | D/K |
| 0 | 1 | 1 | 0 | 0 | I |
| 1 | 0 | 1 | 1 | 0 | L |
| 1 | 1 | 0 | 1 | 0 | L |


440541-1B
AGC
VCO B/G
VCO L'
NL211
ZL201
XF06
N142
C
B E

### ZF-Modul/ IF module/ Module IF/ Modulo MF - STEREO PLUS MULTINORM

**5825 40 82**

| | | |
|---|---|---|
| **Integr. Schaltung**/ Integrated circuit/ Circuit intégrés | | |
| **NL 211** | TDA 9814 T | 3741 00 04 |
| **NL 281** | SAA 1300 | 3779 12 17 |
| **Transistor**/ Transistron | | |
| **VL 201** | BF 824 Chip | 3612 07 51 |
| **VL 203**/221/222/227/234/235/ 236/237/275/283/284/285 | BC 848 B Chip | 3614 53 22 |
| **Diode** / Diodo | | |
| **VL 202** | BA 782 MIN | 3656 04 20 |
| **VL 211**/212/281/282 | LL 4148 F MIN | 3656 03 11 |
| **VL 231**/232/233 | BA 782 MIN | 3656 04 20 |
| **Potentiometer**/ Potentiométre/ Potenziometro | | |
| **RL 217** | 10 kΩ | 3111 26 19 |
| **RL 286** | 22kΩ | 3123 00 04 |
| **Transformator**/ Transformer/ Transformateur/ Trasformatore | | |
| **TL 201** | SMD | 4523 11 25 |
| **Drossel**/ Choke/ Bobine de self/ Bobina | | |
| **LL 222** | 15µH | 4557 16 74 |
| **Filter**/ Filtre/ Filtro | | |
| **LL 221** | 250 NH TOKO | 4553 00 02 |
| **ZL 201** | OFW K 6257 | 4555 85 84 |
| **ZL 221**/222 | 5,5 MHz | 4555 84 14 |
| **ZL 225** | 6 MHz | 4555 84 15 |
| **ZL 226** | 6,5 MHz | 4555 84 16 |
| **ZL 231** | OFW G 9353 M | 4555 85 87 |
| **ZL 232** | OFW K 9453 M | 4555 85 86 |

### Bild- Referenz- Abgleich (Multinorm-Modul, Chassis 5864 43 07..12,24..27) )

**Norm B/G, I**

1. **Programm**taste drücken.
2. Mit Curser ◀ ▶ auf "TV-Prog" stellen.
3. Mit den **Ziffern**tasten einen Kanal z.B. Kanal **38** eingeben.
4. Gleichspannungsmeßgerät an **TP 205** dann mit **LL 221** auf **2,5V** abgleichen.

**Norm L'**

1. **Programm**taste drücken.
2. Mit Curser ◀ ▶ auf "TV-Prog" stellen.
3. Mit den **Ziffern**tasten einen mittleren Kanal z.B. Bereich 1 Kanal **C** (63,75 MHz) eingeben.
4. Gleichspannungsmeßgerät an **TP 205** dann mit **RL 286** auf **2,5V** abgleichen.

### Equilibrage d'image de référence (Multinorm module, chassis 5864 43 07..12,24..27))

**Norm B/G, I**

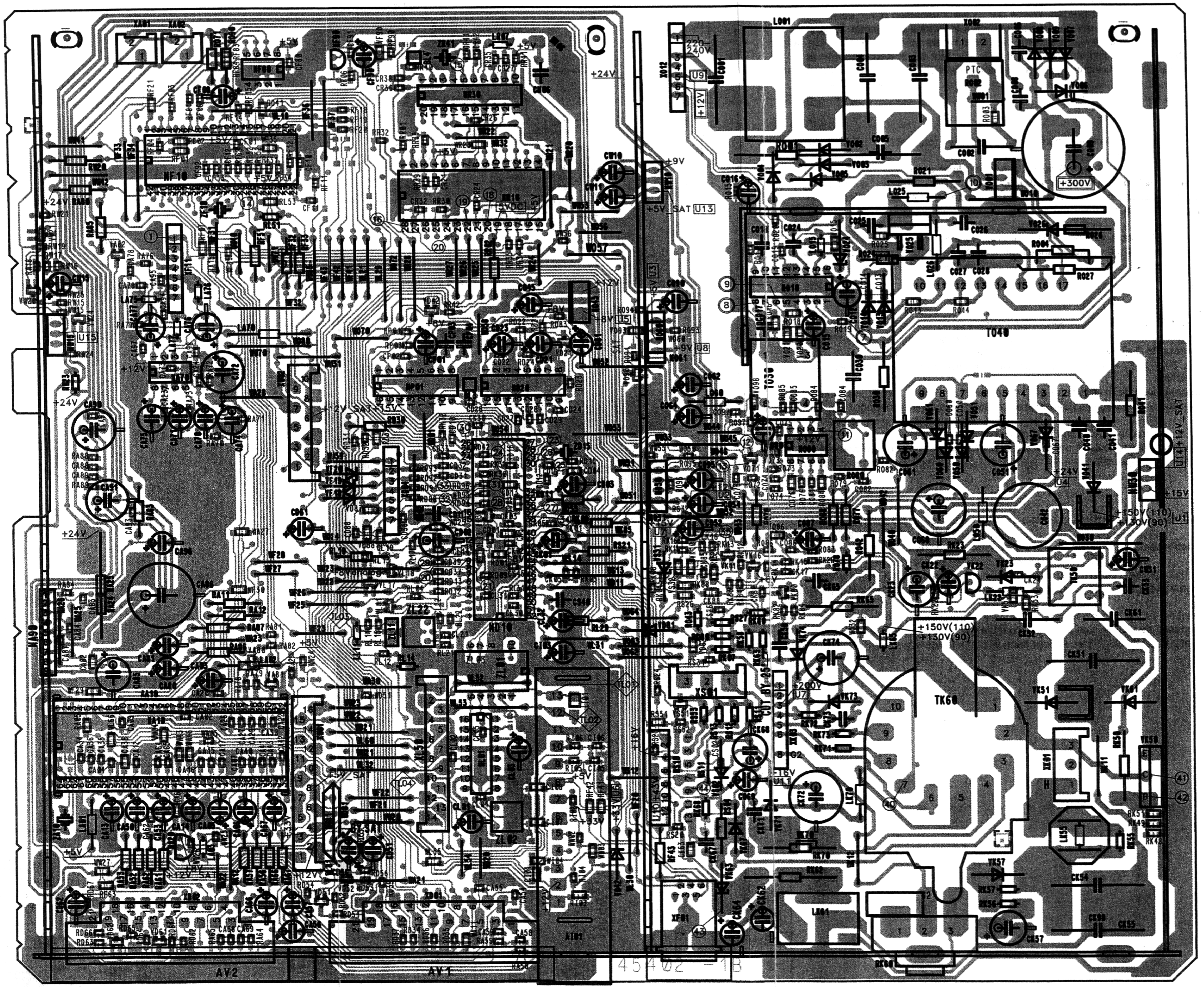
1. Appuyez sur la touche de programme.
2. Ajustez "TV-Prog" au moyen du curseur ◀ ▶.
3. Entrez un canal moyen, p. ex. le canal 38 (607,25 MHz) au moyen des touches numériques.
4. Ajustez 2,5V au moyen de LL 221 (oscilloscope à la broche TP 205).

**Norm L'**

1. Appuyez sur la touche de programme.
2. Ajustez "TV-Prog" au moyen du curseur ◀ ▶.
3. Entrez un canal moyen, p. ex. le canal C (63,75 MHz) au moyen des touches numériques.
4. Ajustez 2,5V au moyen de RL 286 (oscilloscope à la broche TP 205).

Reparaturtips/ Instructions for repair work
Consigli per le riparazioni/ Conseils de réparation

## A 34a

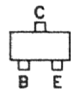

+300V
PTC
T040
T030
TK60
+150V(110)
+130V(90)
+24V
+12V
+5V
+9V
+5V_SAT
+12V_SAT
+15V
+200V
220-240V
AV1
AV2
45402 - 1B

N139

**Chassis**

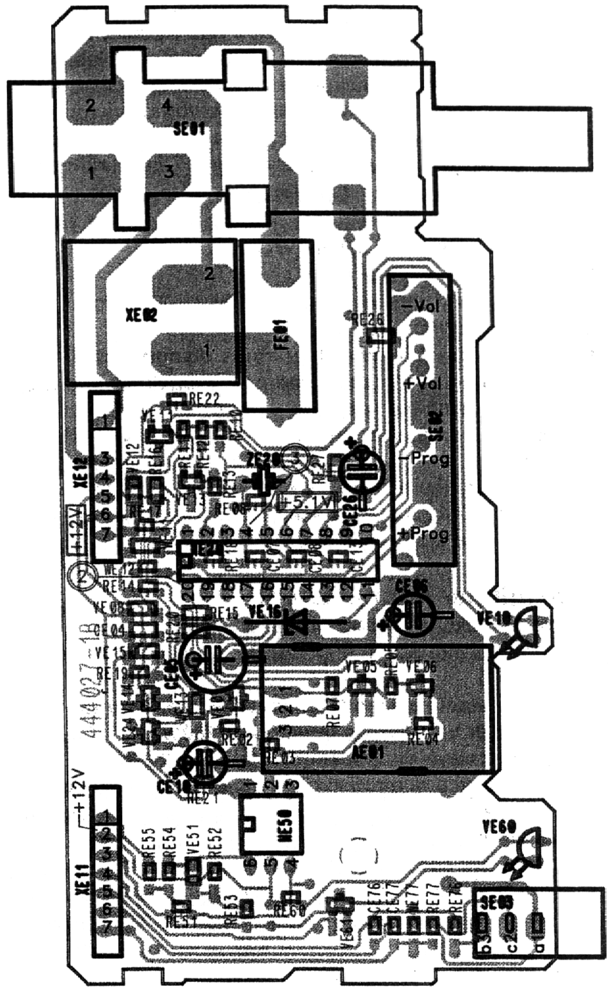
6611 73 19 (9408) S

5

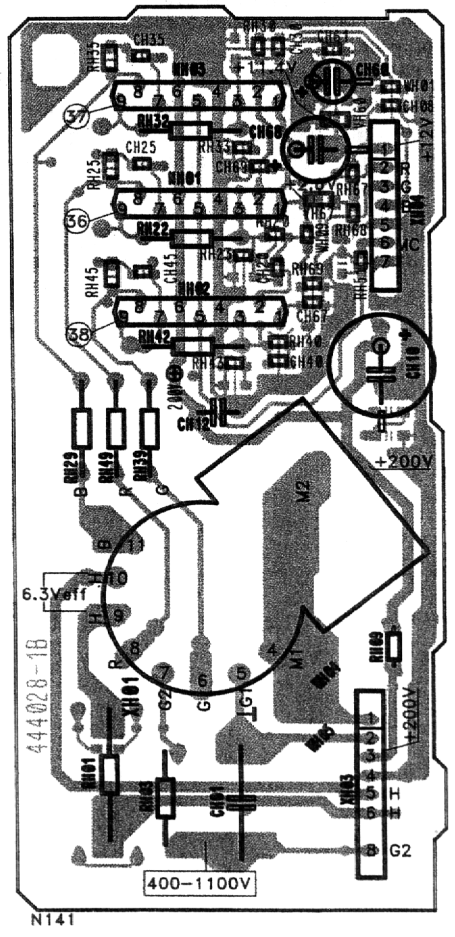


6

Control-unit


SE01
XE02
FE01
-Vol
+Vol
-Prog
+Prog
XE11
+12V
444027-1B
5.1V

N140


+200V
6.3Veff
G2
400–1100V
444028-1B

N141

C.R.T. base board

# NOKIA 6365VT

MODEL

SERVICE MANUAL